

# Wicked problems and challenging opportunities

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# *Wicked problems and challenging opportunities*

Development of integrated public health policies  
for the prevention of obesity



Anna Marie Hendriks

## **Colophon**

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**Wicked problems and challenging opportunities:**  
Development of integrated public health policies for the  
prevention of obesity

**Proefschrift**

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This dissertation is dedicated to the dung beetle, which excels in recognizing a challenging opportunity in a complex problem.

Dit proefschrift draag ik op aan de mestkever die uitblinkt in het zien van een uitdagende mogelijkheid in een complex probleem.



## Preface

*'The mandate is clear and the needs and opportunities are obvious. Rhetoric is easy, and we need to move towards tangible, concrete and replicable insights into how integrated policy responses to complex health issues come about' (Tang et al., 2014, p. 2).*

This quote illustrates the main goal of this dissertation, which is to operationalize the concept of integrated public health policies and to study how we can facilitate and guide their development.

A famous Native American proverb inspired the type of data we gathered in this dissertation, which was qualitative in nature and based on capturing in-depth the experiences of policymakers: *'Don't judge any man until you have walked two moons in his moccasins'.*

While preparing for the research work reported on in this dissertation, we found that few had actually tried to step into the shoes of the persons of whom so much is expected with regard to the development of integrated public health policies: the policymakers themselves.

By trying to view the development of integrated public policies from their perspective, we aimed to collect data that made it possible to identify and understand the reasoning (or lack of reasoning) behind the policymakers' behaviors.

To capture policymakers' views, we integrated insights from organizational change, political and policy science within a behavioral science perspective. This interdisciplinary view of the development of integrated public health policies was relatively new, and we hope to have made an original contribution to the field and taken the development of integrated public health policies a step further.

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## Dissertation outline

In this dissertation, the main research question is answered in nine chapters. After this introduction (chapter 1), the next chapters present our conceptual framework (chapters 2 and 3), the empirical application of our conceptual framework (chapters 4-7), theoretical reflections (chapter 8) and a general discussion (chapter 9).

Chapter 2 introduces two operational criteria (i.e., defining characteristics) that can be used to assess if integrated public health policies are present and determine which aspects require further work to make the policy more 'integrated'.

Chapter 3 introduces a framework which we named the 'Behavior Change Ball' (BCB). This framework organizes ideas and theories regarding the development of integrated public health policies within ten organizational behaviors, determinants of those behaviors, and interventions and policies to address them. The BCB can be used as an analytical tool to make conceptual distinctions and study and guide the development and implementation of integrated public health policies from multiple theoretical perspectives.

Chapter 4 presents one case study in a relatively small Dutch local government examining local government policymakers' views on factors that hamper or facilitate intersectoral collaboration, categorized as relating to capability, opportunity, and motivation.

Chapter 5 presents a study comparing the views of local government policymakers in two relatively small Dutch local governments as regards barriers and facilitators for intersectoral collaboration, again categorized as relating to capability, opportunity, and motivation.

Chapter 6 discusses nine categories of interventions that can promote the development of integrated public health policies. The aim of this study was to examine possible mechanism to stimulate the development of integrated public health policies and overcome barriers to intersectoral collaboration.

Chapter 7 presents a study in the Republic of Fiji on ways in which the obesity prevention policy landscape affects the development of integrated public health policies. We found that the policy landscape provides or restricts opportunities to implement organizational behaviors (OBs) and interventions relevant to the development of integrated public health policies. Understanding this landscape can therefore assist in understanding how the development of integrated public health policies by governments can be promoted.

Chapter 8 discusses how our conceptual framework can be improved by integrating policy and political science perspectives more productively, thereby

applying a more comprehensive approach to understanding the development of integrated public health policies.

Finally, chapter 9 discusses our main findings, the strengths and limitations of the research we have undertaken, and recommendations for future studies and practice. The dissertation ends with a valorization proposal.



# *Chapter 1*

## *Introduction*



# Introduction

*'We must remember health is an outcome of all policies'*

United Nations Secretary General Ban Ki Moon said this in his Statement to the 2009 World Health Assembly (UN, 2009). If we take this statement to be true, we must conclude that we have created many policies that lead to poor health (Carrera, 2014; Tang et al., 2014). Policies have changed our environment and, moderated by socio-cultural, socio-economic and transport modes, have stimulated high food and energy consumption and low physical activity levels (Swinburn et al., 2011). As a result, healthy diet and physical activity choices have become harder, instead of easier choices (Khandekar et al., 2011; Nguyen et al., 2011; Swinburn et al., 2011; Hardoon et al., 2012; Carrera, 2014; Sépulveda and Murray, 2014; Webber et al., 2014; WHO, 2014a; Tang et al., 2014). The current 'obesity epidemic' and related diseases (e.g., cardiovascular diseases, several forms of cancer, type 2 diabetes) reflect this (Alwan et al., 2010; Finkelstein et al., 2012; Lozano et al., 2012; Ebrahim et al., 2013; Webber et al., 2014; World Health Organization, 2013a, 2014a,b,c, 2015a).

In 2013, 2.1 billion people were estimated to be overweight globally including 42 million children under the age of 5 (Ng et al., 2014; World Health Organization, 2014a,c). Between 1980 and 2013, overweight increased by 28% in adults; from 28.8% to 36.9% in adult men and from 29.8% to 38.0% in adult women. In 2014, 39% (38% of men and 40% of women) of adults aged 18 years and over were overweight (more than 1.9 billion adults) and 13% (11% of men and 15% of women) were obese (>600 million adults) (World Health Organization, 2014a,c). Even among children and adolescents and in developing countries, rates have doubled. In 2013, 23.8% of boys and 22.6% of girls in *developed* countries were overweight or obese, while in *developing* countries, 12.9% of boys and 13.4% of girls were overweight or obese (Wagner and Brath, 2012; Ng et al., 2014; World Health Organization, 2014a,b,c). Obesity projections to 2030 indicate that these rates will continue to rise in most countries (Finkelstein et al., 2012; Webber et al., 2014). For example, between 2010 and 2030, rates of overweight (including obesity) in adult men in Ireland are expected to increase from 76% to 91%, and those of obesity from 24% to 27%. Projections for the Netherlands are slightly more encouraging; overweight is expected to decrease from 54% to 49% in men and obesity from 10% to 8%; for Dutch women, the obesity rate is predicted to decrease from 13% to 9%, while overweight is expected to remain stable (Webber et al., 2014).

Since overweight and obesity are associated with lower objective and subjective health (e.g., Daniels et al., 2006; Analitis et al., 2009; Okosun et al., 2010), interest in prevention and treatment has substantially grown over the last decade (Roberto et al., 2015). Studies showed that obesity in childhood was strongly linked to fatty liver disease among children (Sinatra, 2012) and that severely obese children and adolescents experience a quality of life similar to that of children and adolescents

with cancer (Schwimmer et al., 2003). Moreover, since childhood and adolescent overweight and obesity often track into adulthood, there are also long-term consequences (Freedman et al., 2005; Wree et al., 2010; Nguyen et al., 2011; Reilly and Kelly, 2011). One study showed that obesity is associated with several forms of cancer (Campbell et al., 2010; Khandekar et al., 2011; Bhaskaran et al., 2014; Campbell, 2014) and another showed that obese adults receive lower wages, which in turn may lead to a higher risk of obesity (Lempert, 2014).

In addition to these consequences for individuals, communities and governments are also severely affected by the current obesity epidemic. Overweight, obesity and related non-communicable diseases are known to decrease workforce participation and productivity (Klarenbach et al., 2006; Tunceli and Williams, 2006; Puhl and Heuer, 2009; Lehnert et al., 2014), cause huge rises in health care costs and affect economic growth (Thorpe et al., 2004; Van Baal et al., 2006; Finkelstein et al., 2009; Mayer-Foulkes, 2011; Wang et al., 2011; Finkelstein et al., 2012; Popkin et al., 2013; Lobstein et al., 2015). This is especially harmful in developing countries, where overweight and related non-communicable diseases are now emerging in addition to the existing problems of underweight and communicable (i.e., infectious) diseases (Bygbjerg et al., 2012; Varela-Silva et al., 2012). This ‘double burden’ of disease, in combination with often poorly developed health care systems, makes the prevention of obesity in developing countries even more urgent than in most developed countries (Maher et al., 2012; WHO Western Pacific Region, 2012; Snowdon and Thow, 2014; Lobstein et al., 2015).

However, even though governments worldwide are looking for ways to prevent overweight and obesity, few governments have so far been successful in this regard (Novak and Brownell, 2012; Trivedi et al., 2012; Roberto et al., 2015). One of the main reasons for this is that obesity is a problem with a ‘wicked’ character (Rittel and Webber, 1973). This is clarified by six characteristics (table 1.1). First of all, it is hard to formulate the exact *nature* of the obesity problem. For example, the ‘obesity paradox’ indicates that fit individuals who are overweight or obese are not automatically at higher risk for all-cause mortality. Therefore, it remains unclear whether obesity as measured by weight-height ratio (Body Mass Index > 25) is the problem (Barry et al., 2014). Furthermore, experts often disagree about the precise causes of obesity. Some emphasize the lack of physical activity, others bad eating habits, others refer to genetic causes, and some blame the obesogenic environment. Since there are many possible explanations for obesity and individuals have different perceptions of obesity, the proposed solutions also vary. This makes it more difficult to determine the focus of interventions. Should interventions focus on increasing physical activity and fitness, eating habits, genetic counseling or changing environments (Lang and Rayner, 2007; Brownell et al., 2010; Shelley, 2012; Barry et al., 2013)? Secondly, there are no criteria to decide whether a proposed solution for obesity is ‘right’ or ‘wrong’, since evidence for effective interventions is scarce. Therefore, potential interventions can only be more or less *acceptable* relative to each other. It will depend on the stakeholders involved, such as the food industry, governmental policymakers, consumers, and health service officials, what the most acceptable solution is (Puhl et al., 2010; Hurt

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et al., 2013; Lusk et al., 2013). Thirdly, each ‘solution’ can be improved indefinitely, as there is no clear ultimate goal. For example, stakeholders might want to stop the rise of obesity, reduce overweight, or completely eliminate the problem. Fourthly, it is not possible to delineate obesity and identify its root cause; every problem can be considered a symptom of another problem (Finegood, 2012). For example, low socio-economic status might be a *cause* of overweight because healthy foods are often more expensive, but low socio-economic status might also be a *consequence* of overweight because overweight individuals are often stigmatized in the workplace and earn less than their normal-weight counterparts (Lempert, 2014). Therefore, one cannot be sure of the appropriate level at which to intervene. Fifthly, since the stakeholders and concrete situations differ, and the causes and potential solutions also differ for each subgroup, each wicked problem is unique and new. Wicked problems do not repeat themselves. Sixthly, solutions can not be trialled and excluded to find the correct solution. Often, the only option is critically informed trial and error (Rittel and Webber, 1973).

Characteristics	Tame problems	Wicked problems
Problem formulation	Can clearly be written down as a gap between what is and what ought to be; easy agreement about the definition of the problem.	Difficult to define: many possible explanations may exist; individuals perceive the issue differently; the solution takes different forms depending on the explanation one chooses.
Testability	Potential solutions can be tested as either correct or false.	There is no single set of criteria for whether a solution is right or wrong; they can only be more or less acceptable relative to each other.
Finality	Problems have a clear solution and ultimate goal.	There is always room for more improvement and potential consequences may continue indefinitely.
Level of analysis	It is possible to delineate the problem and identify its root cause; there is no need to argue at which level to intervene.	Every problem can be considered a symptom of another problem; it has no identifiable root cause, and one is not sure of the appropriate level at which to intervene.
Replicability	It may repeat itself many times.	Every problem is essentially unique.
Reproducibility	Solutions can be trialled and excluded until the correct solution is found.	Each problem is a one-shot operation; once a solution is attempted, one cannot undo what one has already done.

Table 1.1 Characteristics of tame and wicked problems (adapted from Rittel and Weber, 1973)



These ‘wicked’ characteristics imply that finding solutions for obesity cannot be based on traditional linear approaches which assume solutions can be found by gathering data, analyzing them, and formulating and implementing a solution. Although this approach works for ‘tame’ problems, finding ‘solutions’ (i.e., developing an approach) for wicked problems will happen through leaps of opportunity determined by trial-and-error learning, since our understanding of overweight and obesity evolves until the solution is found. Thus, approaches to wicked problems require long-term, innovative ‘integrated’ approaches that are based on ‘systems thinking’ (Conklin, 2005; Hunter et al., 2009; Finegood, 2012; Storm et al., 2012; Johnston et al., 2014).

Unfortunately, most governments and institutions are focused on the short term and not well equipped for innovating, developing an integrated approach and applying systems thinking (Borins, 2001; LaPalombara, 2001; Bovill, 2009; Bacigalupe et al., 2010; De Leeuw and Peters, 2014). One of the main reasons for this seems to be that politicians’ terms in office are short and political commitments (usually) are as well (LaPalombara, 2001; Bovill, 2009; Bacigalupe et al., 2010). A second reason is that ‘intersectoral collaboration’ (ISC) is required. Stakeholders in a wide range of health (e.g., health promoters) *and* non-health (e.g., spatial planning, economics, and agriculture officials) sectors situated *within* governments (e.g., national, regional, and local governments), but also public (e.g., schools) and private stakeholders (e.g., food industry) and consumers *outside* government should collaboratively develop and implement an integrated obesity prevention approach for the *long term* (Dahlgren and Whitehead, 1991; Kickbusch, 2010; Roberto et al., 2015). Since both long-term commitments and ISC are prone to barriers, the development of an integrated approach in practice often encounters resistance.

To overcome these barriers, experts advocate developing ‘integrated public health policies’; policies that integrate *‘health considerations into other policies and sectors beyond the health sector’* (Ståhl et al., 2006). This notion is not new. Since the Alma Ata Declaration on Primary Health Care (1978) and the Ottawa Charter for Health Promotion (1986) there has been a proliferation of scientific reports, governmental statements and meetings to strengthen the development of such integrated policies (e.g., Travis et al., 2002; Ståhl et al., 2006; Kickbusch et al., 2010; Aarts et al., 2011a,b; Olilia et al., 2011; Steenbakkers et al., 2011; McQueen et al., 2012; Storm et al., 2012; Kranzler et al., 2013; Leppo et al., 2013; Storm et al., 2007, 2012). Examples of meetings and reports on integrated public health policy include the WHO global health promotion conferences in Adelaide (1988), Sundsvall (1991), Jakarta (1997), Mexico City (2000), Bangkok (2005), and Nairobi (2009), the Rio Political Declaration on Social Determinants of Health (2011), the Political Declaration of the UN High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases (2011), the Rio+20 Outcome Document (the Future We Want) (2012), and recently the Helsinki Statement on Health in All Policies and the HiAP Framework for Country Action (2014). All these efforts have been setting the stage for integrated public health policies and emphasize that such policies should address *complex* health

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challenges *across* portfolio boundaries (Kickbusch et al., 2010; Gortmaker et al., 2011; Novak and Brownell, 2012; Dubé et al., 2014; Stewart et al., 2014; World Health Organization, 2014b,e; Roberto et al., 2015).

Examples of such integrated policy include combining changes in spatial planning policies that determine how activity-friendly neighborhoods are designed, which may affect the amount of physical activity (PA) children can engage in when they are at home (Aarts et al., 2011a); agricultural policies that affect the price and availability of fruits and vegetables, which may affect the opportunities for low-income families to eat healthy foods (Stewart et al., 2014); food taxes (e.g., on sugary drinks) and food subsidies that can reduce the motivation to drink high-sugar soft drinks (Thow et al., 2014); education policies that can affect adolescents' motivation to eat healthy food and PA classes in the school curriculum that can increase PA skills; marketing policies that can reduce food and beverage marketing targeting children and decrease children's motivation to consume unhealthy food and drinks (Novak and Brownell, 2012); and legislation like bans on foods or ingredients (such as trans fats) deemed to be harmful to health (Angell et al., 2009; Thomas and Gostin, 2013).

It is important to note that if *each* of these policies is implemented in isolation, this is unlikely to reduce obesity (Snowdon, 2010; De Leeuw and Peters, 2014); this would reflect a fragmented approach which ignores the wicked character of obesity. Therefore, depending on the specific situation, a combination of policy measures should be implemented *simultaneously* to create a 'leptogenic' (the opposite of obesogenic) environment in which there is a low risk of obesity because there is easier access to healthy foods and PA opportunities (Swinburn et al., 1999).

A successful example of an approach that explicitly incorporates the principles of an integrated approach is 'Ensemble Prévenons l'Obésité Des Enfants' (EPODE, or Together Let's Prevent Childhood Obesity) (Borys et al., 2012; EPODE, 2014). Its success was found to be based on five 'pillars' (i.e., effective elements): (1) long-term and broad (i.e., from health and non-health sectors) political commitment as reflected in integrated public health policies, (2) implementation of integrated interventions, (3) use of social marketing, (4) strengthening of parenting styles in existing interventions, and (5) scientific evaluation (Van Koperen et al., 2013). Since EPODE proved to be effective, governments worldwide (including the Dutch government) also wanted to implement this approach. They translated EPODE as 'Youth on a Healthy Weight' (which is known in Dutch by the acronym JOGG) (Jongeren op Gezond Gewicht, 2010). However, which activities (ideally) would need to take place in each EPODE pillar was poorly understood. This made it difficult to guide, monitor, and evaluate the development and implementation of this integrated approach. The Dutch Ministry of Health therefore established a research consortium called 'CIAO' (Consortium Integrated Approach Overweight) consisting of five research projects to examine each pillar (Van Koperen et al., 2014). The current dissertation presents the project regarding the first pillar of EPODE (or JOGG): the development of integrated public health policies.

This project was deemed necessary because, despite the long history of integrated public health policy and broad agreement about the value of such policies, insights that can be used to specifically monitor and evaluate the ‘integration’ aspect were scarce. There was little consensus on *when* a policy response can be considered ‘integrated’ and when not (i.e., lack of operational criteria); insights into *how* integrated policies are developed were scattered across different theoretical frameworks and across the literature in a wide variety of disciplines (i.e., lack of a comprehensive framework); and policymakers’ views on facilitators and barriers regarding such policies were often not known (i.e., lack of insight into the views of those formally responsible for the development of integrated policy) (Harting et al., 2011; Hendriks et al., 2013b, 2014; Tubbing et al., 2012, 2015).

In view of these knowledge gaps, it was difficult to compare results across studies and work towards ‘*tangible, concrete and replicable insights*’ (Tang et al., 2014, p. 2) relevant to those formally responsible for the development of integrated public health policy. Therefore, the following objective was formulated for the research on which this dissertation is based.

### Objective of this dissertation

The objective of the research project described in this dissertation was to develop a conceptual framework for the development of integrated public health policies to prevent ‘wicked’ public health problems, to apply this to obesity prevention, and examine the facilitators and barriers for the development of these policies from the perspective of policymakers *within* government (as they are formally responsible for the development of integrated policy).

Our main research question therefore was: *‘What are defining characteristics of integrated public health policies, how can we study and guide the development of integrated public health policies, and what facilitates or hampers the development of integrated public health policies?’*

To achieve this goal, we used a new perspective in the policy field; we adopted a behavioral science perspective in which we combined political and policy science perspectives. The reason for choosing this combination of perspectives was that we considered ‘policymaking’ a behavior, which can thus be explained by behavioral theory, but also acknowledged that policymaking is basically a *political* process (Stone, 1997). Important focal points from the behavioral perspective include the capability, opportunity, and motivation aspects of policymakers’ behaviors, while the aspects considered most important from the political and policy perspective are interests, status, or power within wider systems (Brown, 2010; Michie et al., 2011; Hendriks et al., 2015c).

By combining both perspectives we aimed to provide a more comprehensive ‘integrated’ view of the development of integrated public health policies that can lead to cross-fertilization and take the field a step further.



# *Chapter 2*

## *'Are we there yet?'*

Operationalizing the concept of integrated public health policies

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### Abstract

**Background:** Although ‘integrated’ public health policies are assumed to be the ideal way to optimize public health, it remains hard to determine how far removed we are from this ideal, since clear operational criteria and defining characteristics are lacking.

**Methods:** A literature review identified gaps in previous operationalizations of integrated public health policies. We searched for an approach that could fill these gaps.

**Findings:** We propose the following defining characteristics of an integrated public health policy: (1) the combination of policies includes an appropriate mix of interventions that optimizes the functioning of the behavioral system, thus ensuring that motivation, capability and opportunity interact in such a way that they promote the preferred (health-promoting) behavior of the target population, and (2) the policies are implemented by the relevant policy sectors from different policy domains.

**Conclusion:** Our criteria should offer added value since they describe pathways in the process towards formulating integrated public health policy. The aim of introducing our operationalization is to assist policymakers and researchers in identifying truly integrated cases. The Behavior Change Wheel proved to be a useful framework to develop operational criteria to assess the current state of integrated public health policies in practice.

## Background

Integrated public health policies are often advocated, since they are assumed to pave the way to a healthier society (Kickbusch et al., 2008; Kickbusch, 2009; Warner and Gould, 2009; Storm et al., 2011). However, it is difficult to evaluate the extent to which health policies are integrated, since a clear operational definition of integrated public health policies is lacking (Harting et al., 2011; Tubbing et al., 2015).

Many researchers have described integrated public health policies in abstract terms, such as 'health in all policies' (Kickbusch et al., 2008; Kickbusch, 2009), 'multi-sectoral policy' (Aarts et al., 2011a,b) and 'integral health policy' (Storm et al., 2007; Steenbakkers, 2012). Various approaches also (sometimes implicitly) recommend the use of integrated public health policies, such as 'whole-of-government' and 'whole-of-society' approaches, 'governance for health' or 'nudge policies' (Kickbusch et al., 2008; Thaler and Sunstein, 2008; Marteau et al., 2011). Although these designations may be useful in some contexts, they lack concrete criteria for a *practical evaluation* of the extent to which a policy is 'integrated'.

The reason why such 'vague' designations have been formulated may be related to the unpredictable wicked (i.e., complex) nature of policy development (De Leeuw and Poelman, 1995; Exworthy, 2008; Head, 2008; Head and Alford, 2008; Harting et al., 2011; Maas and Storm, 2011; De Leeuw and Peters, 2014). By 'wicked' we mean that the policy process is often non-linear and complex due to competing values of those who develop, implement or are affected by the policy (Head and Alford, 2008). The fact that the reality of policy development manifests itself differently each time encourages the use of higher order categories (i.e., abstractions) to define integrated public health policies, as they embrace, rather than exclude, different types of such policies (Trope and Liberman, 2010).

Although it is unlikely that a single operationalization of integrated public health policies will be sufficient to fully capture the complex reality of developing such integrated public health policies, more precise operationalization is needed for the conduct of research, as well as for the daily practice of developing integrated public health policies, e.g., performing a document analysis to formulate recommendations for policy development or guiding policy development within local governments. Without this operationalization, scientists and policymakers lack an important prerequisite for change, which is 'having a clear goal' (Whitehead et al., 1998). In this paper, we propose operational criteria for evaluating the range and magnitude of integrated public health policy.



### Methods

Our method was based on four steps: (1) conducting a literature review of publications that propose an operationalization of integrated public health policies and related notions (e.g., health in all policies) using the following search terms: health in all policies, intersectoral action, intersectoral action for health, health governance, health policy, public policy, as well as finding common elements in these publications; (2) identifying gaps in the operationalizations, especially regarding their ability to *distinguish* the concept of integrated public health policies from other related notions, such as 'health policy', 'intersectoral policy' or 'intersectoral action', and, based on these shortcomings, establishing goals for new criteria; (3) searching for conceptual approaches to fill the gaps using a narrative review; (4) proposing operational criteria that may be used for *theoretical* (e.g., document analysis) and *practical* purposes (e.g., to define the shortcomings of current policies). By introducing this operationalization, we hope to enable researchers and policymakers to answer the question that has been asked since the pursuit of integration has become a widely recognized ideal (World Health Organization, 1986): 'Are we there yet?'

### Findings

#### Literature review of previous operationalizations

Table 2.1 provides an overview of the previous publications in the field of integrated public health policies (Travis et al., 2002; Bekker, 2007; Kickbusch et al., 2008; Kickbusch and Buckett, 2010; Aarts et al., 2011a,b; Ollila, 2011; McQueen et al., 2012; Steenbakkens, 2012; Kranzler et al., 2013; Leppo et al., 2013; Storm et al., 2007, 2012, 2014). What these publications have in common is that they emphasize: (a) establishing broader goals, not necessarily health, (b) the need for intersectoral action, (c) a focus on social determinants, such as equity, (d) the search for 'synergies', based on the assumption that more is achieved together compared to working alone; (e) the need to appoint stewards from the health sector, who should proactively advocate changes in non-health sectors, familiarize themselves with the work of non-health sectors (in terms of language and desired outcomes) and think outside the 'health box' to examine the more general policy context in view of potential implications for health determinants, (f) that health may act as a *vehicle* to influence other governmental agendas, i.e., that health should not necessarily remain at the core (except in Ollila (2011)), (g) stages of policy development, and (h) that integrated health policies should be grounded in health-related rights and obligations.

#### Gaps in previous designations and establishing goals for new criteria

What seems to be missing in previous publications is a clear causal pathway between the assessment of health determinants and 'integrated' interventions or 'integrated' public health policy, making it difficult to determine when and why a case is 'integrated' or not. Since operational criteria should have the ability to *distinguish* 'integratedness' from other related notions (e.g., health policy), and to

*judge* cases (e.g., policy documents), or *guide* policy developments towards more integration, we felt that the development of operational criteria required at least four goals to be met. Criteria should have the ability to: (1) 'judge' if a policy is integrated, (2) 'guide' towards more integration, (3) provide a comprehensive view of several possibilities to achieve integration, and (4) incorporate the distinguishing feature of 'integration'. We also wanted to strengthen the theoretical basis of the operationalization. Therefore, we looked for a framework that could describe sets of policies (i.e., policy categories) and their links with specific interventions to achieve the goal of integration.

### **Conceptual approaches to evaluate public health policy integration**

Based on the goals we established for operational criteria, we looked for conceptual approaches that could meet all of the above purposes. The Behavior Change Wheel (BCW) (Michie et al., 2011; Cane et al., 2012) was identified as an appropriate framework (figure 2.1). The BCW is a synthesis of 19 behavior change frameworks developed in health, environment, culture change and social marketing, identified in a systematic literature review (Michie et al., 2011) and it has been applied in operationalizing integration regarding policy development and implementation (Hendriks et al., 2012, 2013a,b, 2015a).

Table 2.1 Definitions and goals of integrated public health policies or related notions with a similar content, as proposed in the literature

Authors	Defining characteristics or operational criteria as described in the literature
Kickbusch et al. (2008)	<ul style="list-style-type: none"> <li>- A Health in All Policies approach reflects health as a shared goal of government.</li> <li>- It is an innovative strategy that reflects the critical role that health plays in the economic and social life of 21st century societies.</li> <li>- It introduces health improvement, improved public health outcomes, and closing the health gap as shared goals across all parts of government.</li> <li>- It aims to address complex health challenges through an integrated policy response across portfolio boundaries.</li> <li>- By incorporating a concern with health impacts into the policy development process of all sectors and agencies, it allows governments to address the key determinants of health in a more systematic manner.</li> <li>- It also takes into account the benefit of improved population health for the goals of other sectors.</li> </ul>
Aarts et al. (2011a,b)	<ul style="list-style-type: none"> <li>- Multi-sector policy is working across sectors towards a coherent policy plan for stimulating physical activity among children.</li> <li>- This is necessary because effectively addressing physical as well as social environmental determinants of physical activity in children is for a large part dependent on policy measures outside the public health domain.</li> </ul>
Steenbakkers (2012)	<ul style="list-style-type: none"> <li>- Health in All Policies aim at finding solutions outside the health domain and are developed through intersectoral collaboration.</li> </ul>
Travis et al. (2002)	<ul style="list-style-type: none"> <li>- Using a 'steward' who brings actors from different sectors domain together to:</li> <li>- improve the determinants of public health;</li> <li>- improve intersectoral collaboration.</li> </ul>
Olila (2011)	<ul style="list-style-type: none"> <li>- In the health strategy, health objectives remain at the core of the exercise.</li> <li>- The aim is to get the 'other sectors' to adopt policies and measures to achieve public health goals</li> <li>- An analysis should be made of:</li> <li>- the health situation and its determinants;</li> <li>- the policy environment, to identify opportunities for improving health by amending the determinants through changes in policies and, based on that, being proactive in advocating such changes (steward).</li> <li>- Four main strategies to improve the implementation of this approach are discussed.</li> </ul>
Leppo et al. (2013)	<ul style="list-style-type: none"> <li>- Health in All Policies (HiAP) is an approach to public policies;</li> <li>- that works across sectors;</li> <li>- that systematically takes into account the health and health systems implications of decisions;</li> <li>- that seeks synergies;</li> <li>- that avoids harmful health impacts, in order to improve population health and health equity;</li> <li>- that is founded on health-related rights and obligations;</li> <li>- that emphasizes the consequences of public policies on health determinants, and aims to improve the accountability of policy makers for health impacts at all levels of policy-making</li> </ul>
Kranzler et al. (2013)	<ul style="list-style-type: none"> <li>- Operationalization of integrated public health policies based on the following criteria:</li> <li>- including, integrating or internalizing health in other policies (i.e., policy practice);</li> </ul>

Kickbusch and Buckett (2010)	<ul style="list-style-type: none"> <li>- focusing on policies that shape or influence the social determinants of health;</li> <li>- familiarizing the health sector with policy goals and processes of other sectors in order to steer policy making into health-promoting directions and foster a governmental agenda that is congruent with and complementary to health goals;</li> <li>- rather than competing for health to be placed at the center of an increasingly complex, expensive and saturated policy-making agenda.</li> <li>- HiAP advocates leveraging health in the service of other agendas.</li> <li>- Horizontal, complementary policy-related strategy with a high potential to contribute to population health.</li> <li>- The core is to examine determinants of health which can be influenced to improve health but are mainly controlled by policies of sectors other than health.</li> <li>- The goal of the policies we make does not necessarily have to be public health, but can shift from intersectoral action for health to intersectoral action for shared societal goals.</li> </ul>
Storm et al. (2007, 2012)	<ul style="list-style-type: none"> <li>- Equity, with health as one important indicator, is an entry point that may hold promise in many political contexts</li> <li>- Integrated health policies (IHPs) are policies in which the main relevant sectors within and outside of the public health domain collaborate to address aspects of health.</li> <li>- The common goal is to promote or protect health.</li> <li>- Intersectoral collaboration means collaboration between various policy sectors at the same administrative level and is an important precondition for implementing integrated health policies.</li> <li>- Health inequalities can be reduced using IHP, since such inequalities are closely associated with delays in many other areas.</li> <li>- Correcting this disadvantage requires not only the commitment of the public health sector, but also input from other sectors, such as education, planning and sports.</li> <li>- A positive impact on these health inequality issues is needed from sectors within as well as outside the health domain.</li> <li>- This policy aims at influencing health through its associated determinants.</li> </ul>
McQueen et al. (2012)	<ul style="list-style-type: none"> <li>- The three major concepts of 'social determinants of health', 'health in all policies' and 'governance' are interrelated.</li> <li>- Governance is seen as acting on social determinants and achieving HiAP.</li> <li>- HiAP is a policy practice adopted by leaders and policy makers to integrate consideration of health, well-being and equity during the development, implementation and evaluation of policies.</li> <li>- Intersectoral governance structures are linked with intersectoral governance action to support HiAP.</li> </ul>
Storm et al. (2014)	<ul style="list-style-type: none"> <li>- A whole-of-government approach with a focus on health.</li> <li>- The alleviation of wicked public health problems, like inequalities in health, requires integrated contributions from health and non-health sectors.</li> <li>- Only joint efforts of multiple sectors and actors could effectively influence the determinants of health inequalities.</li> <li>- Maturity model definition classifies HiAP growth processes:</li> <li>- recognition of the importance of HiAP (Stage I);</li> <li>- HiAP described in policy documents and collaboration with sectors present (Stage II);</li> <li>- concrete collaboration agreements and systematic forms of consultation (Stage III);</li> <li>- broad, shared vision on HiAP (Stage IV).</li> </ul>

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### Bekker (2007)

- Public health policy covers a broad spectrum of health promotion, protection and disease prevention.
  - The idea of 'healthy public policy': underlying public health policy is a general idea that public health should not be strictly assigned to one authority or sector, but integrated in all the activities of government.
  - Public health has many determinants that are addressed or affected by many non-health policies. All health problems, even the genetic ones, are related to the environment, with respect to the severity of symptoms and the conditions for recovery or 'learning to live with' a chronic condition.
  - Given that these determinants are influenced and controlled by a wide range of policies, Health Determinants theory contends that such multi-causality requires a policy response that exceeds the sectoral organisation of government and the public-private divide.
  - Many of the current health problems could be addressed more effectively and more efficiently by seeking cooperation with non-health policy sectors, which would have to result in 'healthy public policy'.
-

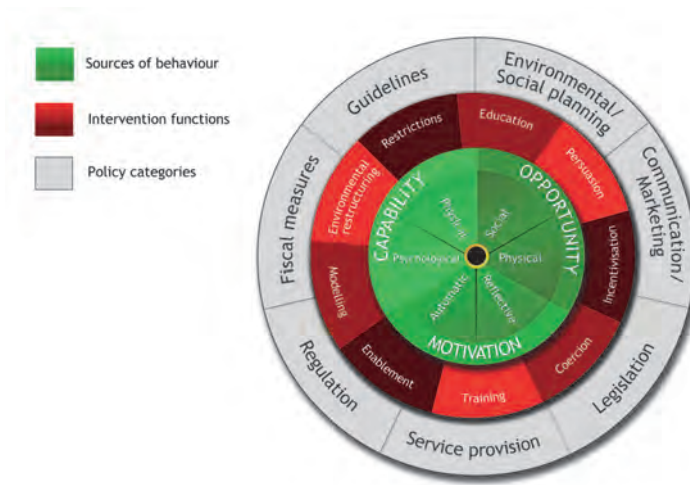


Figure 2.1 The Behavior Change Wheel from Michie et al. (2011)

At the centre of the BCW is the COM-B model, a theory-based model to understand behavior (figure 2.2). The model comprises three components: capability, which can be physical or psychological; opportunity, which can be physical or social; and motivation, which can be reflective (involving self-conscious planning, analysis and decision-making) or automatic (involving emotional reactions, drives, impulses and habits) that are necessary for a given behavior to occur, which provides a simple approach to understanding behavior *in context*.



Figure 2.2 The COM-B model

Making a particular behavior happen requires sufficient capability, opportunity and motivation. The absence of one of these determinants makes it difficult for the system to function. For example, when children are not physically active (behavior), this might be caused by a lack of opportunity (e.g., no playgrounds near their house), and not by a lack of motivation (e.g., enjoying playing outside) or capability (e.g., the skills required to play football). In this example, the behavioral system fails to work due to insufficient presence of opportunity. In the long term, such a dysfunctional system may lead to unhealthy behaviors (e.g., lack of physical



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activity) and subsequently to public health problems, such as childhood obesity. To improve public health, policymakers and others whose aim it is to improve public health should therefore focus on the aspects of the behavioral system that, if changed, would bring about the maximum shift in the desired direction. In our example, this would mean that policymakers should at least *consider* creating playgrounds in a neighborhood (interventions) and develop policies that enable these interventions (e.g., adjusting zoning policies that regulate the size, type, structure and use of land or buildings in designated areas). In addition, issues of feasibility, acceptability, affordability and political expediency also have to be considered when choosing interventions and policies (Atkins and Michie, 2015).

Nine intervention functions and seven policy categories form the middle and outer rings of the wheel. Linkages between the COM-B model, intervention functions and policy categories allow a systematic, comprehensive approach to intervention design and delivery (tables 2.2 and 2.3).

The BCW has been used to reliably characterize interventions included in the British Department of Health's 2010 tobacco control strategy and the UK's National Institute for Health and Care Excellence (NICE) guidance on reducing obesity (Michie et al., 2011). The intervention functions of the BCW have been used to classify interventions identified in a Cochrane systematic review of adherence to dietary advice for preventing and managing chronic diseases in adults (Desroches et al., 2013) and are currently being used to classify components of cost-effective interventions informing NICE Guidance across several behavioral domains: smoking, diet, exercise, alcohol, sexual health and multiple health behaviors (Beard et al., 2013). The BCW has also been used to design and develop complex, multi-level interventions including one to improve the delivery of paediatric services in Kenya (English, 2013). It is currently being used to design interventions at the service and individual levels to manage cardiovascular disease risk in people with mental illness and to reduce variation in adenoma detection rates in routine colonoscopy exams.



Table 2.2 Linkage between COM-B components and intervention functions and policy categories

	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Physical capability									
Psychological capability									
Physical opportunity									
Social opportunity									
Automatic motivation									
Reflective motivation									

Table 2.3 Linkage between intervention functions and policy categories

	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Communication									
Guidelines									
Fiscal measures									
Regulation									
Legislation									
Environmental/ Social planning									
Service delivery									

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### **The operationalization**

Based on the assumptions of the BCW, we propose an operationalization of integrated public health policies with a view to facilitating policymakers and those who support them in monitoring *and* developing policies. Since the rationale behind the implementation of an integrated approach is that policies enable interventions that make the behavioral system function (i.e., ensure sufficient presence of, and synergy between, motivation, capability and opportunity), we argue that policies need to be developed to enable these interventions (Exworthy, 2008; Glickman et al., 2012; Kickbusch and Gleicher, 2012). In other words, making policies ‘integrated’ requires that they *enable* interventions which can restore or promote unity in the behavioral system, in order to optimize its functioning and thus lead to certain health-promoting behaviors.

Based on this rationale, we argue that two criteria can be used to assess the extent to which public health policies are integrated: (1) whether the combination of policies (e.g., as described in policy documents) includes an appropriate mix of interventions that optimizes the behavioral system’s functioning, thus ensuring that motivation, capability and opportunity interact in such a way that they promote the preferred (health-promoting) behavior of the target population, and (2) whether the policies (or combination of policies) are developed and implemented by the relevant policy sectors from different policy domains (i.e., intersectoral collaboration), in other words, by the policy sectors which are relevant for the development of the policy. With regard to (1), this means *acknowledging* that the way in which behavioral influences interact should be at the core of policy development for complex public health problems, such as childhood obesity (Glickman et al., 2012). With regard to (2), examples of ‘different’ policy domains include spatial planning (built environment) and youth services (social environment) or financial departments and public health.

## **Discussion**

In this article, we have proposed an operationalization of ‘integrated public health policies’ based on two criteria that can be used to assess the extent to which public health policies are integrated. The first criterion is that the combination of policies (e.g., as described in policy documents) includes an array of appropriate interventions that optimize the behavioral system’s functioning, thus ensuring that motivation, capability and opportunity interact in such a way as to promote the preferred (health-promoting) behavior of the target population. The second criterion is that the policies (or combinations of policies) are developed and implemented by the relevant policy sectors.

### **Common elements in previous publications**

In previous publications, integrated public health policies were designated by referring to a synergistic set of policies (the policy content), specifically the added value of integration, and the involvement of policy actors within and outside the health sectors (i.e., intersectoral collaboration) (Travis et al., 2002; Bekker, 2007; Kickbusch et al., 2008; Kickbusch and Buckett, 2010; Aarts et al., 2011a,b; Ollila, 2011; McQueen et al., 2012; Steenbakkers, 2012; Kranzler et al., 2013; Leppo et al., 2013; Storm et al., 2007, 2012, 2014). The main ambiguity in these publications seems to be whether the focus should be on a health goal per se, or if a focus on broader societal goals (primarily 'equity') might yield better results in terms of getting non-health sectors 'on board'. Remarkably, although others have briefly paid attention to the role of the health sectors (e.g., being pro-active in exploring the work of other sectors (Ollila, 2011; Kranzler et al., 2013), Travis et al. (2002) seem to be the only ones who outline the role of the health sectors in great detail, including a description of roles and task distribution.

### **Strengths and limitations of the Behavior Change Wheel as a conceptual approach to operationalize integrated public health policies**

We found that the BCW was a useful theoretical framework to operationalize integrated public health policies. However, besides its conceptual merits it also has some limitations relative to other concepts and approaches. These are outlined below, followed by a discussion of the added value provided by our proposal, relative to the other publications on the topic.

The main strength of the operationalization based on the BCW is that it provides policymakers and researchers with a basis for systematically selecting an appropriate mix of intervention functions and policy categories.

The second strength of our BCW-based operationalization is that it uses criteria by which we can explain why we regard certain policies as 'integrated'. The theoretical basis of the BCW may guide us towards policy measures that can be developed across different sectors. This means that integrated health policies should include intersectoral collaboration. However, the required policies and interventions will depend on what needs to change in the 'behavioral system' to bring about the desired change. This is likely to be relevant to more than one sector. For example, if the COM-B assessment shows that 'opportunity' for physical activity is the problem, intersectoral collaboration is necessary for health sector officials, since policies might have to be developed to, for example, redesign neighborhoods (requiring the involvement of spatial planners). In theory, such an intervention could be developed and implemented by officials within one sector without intersectoral collaboration. In that case, however, we would not consider this an 'integrated' policy, but a 'sectoral' policy. When dealing with complex public health problems, it is highly unusual for the system that is responsible for the 'stubborn' character of these problems to be improved by interventions within one sector. Although sectoral policies are not considered better or worse than integrated policies, the distinguishing feature of integration is that the policy is developed through the collaborative effort of multiple sectors; only then can the

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unique ability to change systems and achieve ‘synergies’ between policies manifest itself and can complex public health problems be effectively addressed. This need for intersectoral collaboration may, in fact, be the reason why the development of integrated public health policies has progressed so slowly, despite serious efforts by advocates throughout the world. Although we do not mean to underestimate the relevance of intersectoral collaboration, we must also not downgrade the responsibility and ability of the health sector itself to improve public health. In India, for example, it is the women from higher socioeconomic classes who are most likely to suffer from obesity, and educating these upper classes about healthy eating might yield better results than improving their opportunities (which are relatively good) (e.g., Rai, 2012).

The third strength of our operationalization is that the BCW can guide us toward the most promising policy categories or intervention functions (based on the COM-B assessment), while at the same time also showing a broad range of options from which policymakers can choose (see tables 2.2 and 2.3). This is similar to using Google maps to get to the right destination. Since this framework provides not only the route towards the destination, but can also produce a ‘street view’, it can also show other options within the nearby environment. This results in a more comprehensive view of the options in the vicinity of the preferred goal (i.e., the intervention functions or policy categories), compared to other frameworks that describe policy options separately without linking them to a wide range of policy categories or intervention functions.

The fourth strength of the BCW approach is that its core, the ‘COM-B’ (figure 2.2), inherently shows mutual relationships between health determinants (e.g., opportunity affects motivation). Since COM-B is described as a ‘system’, it explicitizes that *all* behavioral determinants need to be sufficiently present, i.e., simultaneously and not separately. Thus, policies based on this system will inherently show why a particular policy sector is, in theory, responsible for public health, and that the different policies should be united into a ‘whole’ in order to achieve an effective approach. In our opinion, such a comprehensive view of the determinants of behavior which also takes their inter-relationships into account can be considered not only ‘effective’ but also ‘integrated’. In other words, since ‘integration’ is an ideal, and the ideal of policymakers is usually (if not always) to develop effective policies, we argue that an effective policy mix should always, in principle, be based on the integrated approach.

Besides these strengths, an operationalization based on the BCW also has some limitations. First of all, applying the BCW requires certain research skills, such as assessing which behavioral goals should be targeted in order to achieve health improvement or assessing how a healthy behavior can be achieved. These skills are related primarily to methodological issues for the COM-B assessment. For example, what instruments should be used to determine if children have a certain capability? This might present a problem for policymakers, who often lack the time and skills to figure this out. Therefore, applying our proposed operationalization will most probably require assistance by public health service officials or

researchers. This is further complicated by the fact that each wicked problem is essentially novel and unique (Rittel and Webber, 1973; Conklin, 2006), so that learning from such policies is less likely to occur since such problems are not 'analytically tractable' (Sabatier, 1988). However, if we accept that understanding the behavior that is to be changed is the starting point for any intervention and policy design, and the COM-B is a tool to support understanding of the behavior to be changed, this is, strictly speaking, more a limitation of the policymakers' skills and not of COM-B. Still, we consider this a limitation, since we aim to provide operational criteria that can guide the development of integrated public health policies *in practice*.

The second limitation of our operationalization is that 'success is in the eye of the beholder'. Although the BCW incorporates many content-related factors, it does not describe the policy context. Policy 'success' cannot always be determined in a rational, scientific or foundationalist way. Sometimes, a constructive or discursive view of success might be more suitable to explain the multidimensionality of policy success (McConnell, 2010). A spectrum of policy outcomes might be used to capture what McConnell (2010) calls the many 'grey areas' in between policy success or policy failure. Merely focusing on policy content diverts attention from understanding the processes which explain why intended policy outcomes fail to emerge (Walt and Gilson, 1994). The Behavior Change Ball (BCB) (Hendriks et al., 2013b) was developed to take these context-related factors into account; this framework describes the ten organizational behaviors that might explain why certain 'integrated' policies are developed, implemented or sustained. For example, the BCB contends that the implementation of certain policy measures requires strategic agenda-setting to have taken place, complemented by strategic level leadership and strategic policy formulation. Thus, the BCB serves as a tool that can be used *alongside* the BCW to make implementation of certain policy choices (based on the BCW) more likely or explain policy success or failure as grounded in the policy process.

The third criticism of the BCW may be that its categories are too broad, so that no specific guidance on choosing single interventions or policy measures can be provided based only on the BCW. Nor does the BCW describe which specific policymakers should be involved when developing or implementing certain policy measures (e.g., who should you involve when the BCW recommends investing in marketing?). Thus, although the BCW describes general policy categories and intervention functions, it does not elaborate on how to choose specific policy measures or interventions from the broad range of options that are recommended by linkages between intervention functions and policy categories. For example, if one should choose to improve the opportunity for physical activity, one can choose from at least three intervention functions (restriction, environmental restructuring, enablement), and then three policy categories for restriction, five policy categories for environmental restructuring, and six policy categories for enablement. This yields so many options that it becomes difficult for policymakers to choose. A forthcoming guide to intervention design and evaluation based on the BCW (Michie, Atkins and West, in preparation) shows how a comprehensive

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taxonomy of behavior change techniques - the 'active' component parts in behavior change interventions that are observable, replicable, and irreducible - fit within each intervention function and, like intervention functions and policy categories, should be selected on the basis of evidence, relevance, practicability, affordability, and legal and moral acceptability (Michie et al., 2013; Atkins and Michie, 2015).

### **Added value of our operationalization**

The added value of our operationalization is two-fold: (1) our operational criteria can enable policymakers and researchers to distinguish cases (e.g., documents, public government statements) that satisfy the criteria of 'integration', using criteria with a theoretical foundation. As such, our operationalization can be used alongside existing operationalizations, since they serve different goals. For example, the BCB (Hendriks et al., 2013b) can be used to assess policy processes, while Travis's stewards concept (2002) can be used to assess policy actors, and our proposed operationalization as described in this paper can be used for the development of integrated public health policy *content*. Thus, our operationalization should not be seen as a stand-alone exercise to get a grip on the development and implementation of integrated public health policies. Rather, we recommend using it *alongside* other operationalizations that outline other aspects of integrated public health policies in more detail; (2) it serves as a tool to set clear goals for any attempt to develop 'integrated' public health policies. This is especially important since previous publications only describe that integration is at the 'core' of policy approaches, but do not describe how to set such goals. Since the BCW is inherently about the way 'social determinants' of health can be assessed in an 'integrated' way (i.e., the goals of integrated public health policies) in the COM-B model, we consider that it provides more specific suggestions how integration can be achieved.

Previous publications have, as far as we know, failed to propose concrete operational criteria that can be used to assess the core values of integrated public health policies. And, looking at the enormous number of visionary or symbolic documents, these seem to have been 'over-communicated' over the last twenty years (Travis et al., 2002; Bekker, 2007; Kickbusch et al., 2008; Kickbusch and Buckett, 2010; Aarts et al., 2011a,b; Ollila, 2011; McQueen et al., 2012; Steenbakkers, 2012; Kranzler et al., 2013; Leppo et al., 2013; Storm et al., 2007, 2012, 2014). Although we do not want to overestimate the added value of our operationalization, we feel it is a crucial missing piece of the puzzle which might turn the 'rhetoric' into reality (Bovill, 2009).

## Conclusion

We have proposed an operationalization of the concept of integrated public health policies which is based on the Behavior Change Wheel. This operationalization includes two criteria: (1) whether the combination of policies (e.g., as described in policy documents) enables a mix of interventions that make the behavioral system function (in terms of motivation, capability and opportunity), and (2) whether the policy is developed and implemented by the relevant policy sectors from different policy domains (i.e., intersectoral collaboration). These criteria may be used to make monitoring or guiding the development of integrated public health policies easier for researchers, practitioners (e.g., public health service officials) and policymakers. However, it should be clear that, as with any operationalization, this is only the beginning of a rather extensive exercise of applying these operational criteria. We therefore recommend that policymakers, assisted by public health service officials, or researchers, use this operationalization to guide policy development, and analyze policy documents. By introducing this operationalization in the field, we hope to stimulate the debate on the operationalization of integrated public health policies.





# *Chapter 3*

## *The Behavior Change Ball*

Proposing a conceptual framework for integrated local public health policy, applied to childhood obesity

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### Abstract

**Background:** Childhood obesity is a ‘wicked’ public health problem that is best tackled by an integrated approach, which is enabled by integrated public health policies. The development and implementation of such policies have in practice proven to be difficult, however, and studying why this is the case requires a tool that may assist local policymakers and those assisting them. A comprehensive framework that can help to identify options for improvement and to systematically develop solutions may be used to support local policymakers.

**Discussion:** We propose the ‘Behavior Change Ball’ as a tool to study the development and implementation of integrated public health policies within local government. Based on the tenets of the ‘Behavior Change Wheel’ by Michie et al. (2011), the proposed conceptual framework distinguishes organizational behaviors of local policymakers at the strategic, tactical and operational levels, as well as the determinants (motivation, capability, opportunity) required for these behaviors, and interventions and policy categories that can influence them. To illustrate the difficulty of achieving sustained integrated approaches, we use the metaphor of a ball in our framework: the mountainous landscapes surrounding the ball reflect the system’s resistance to change (by making it difficult for the ball to roll). We apply this framework to the problem of childhood obesity prevention. The added value provided by the framework lies in its comprehensiveness, theoretical basis, diagnostic and heuristic nature and face validity.

**Conclusion:** Since integrated public health policies have not been widely developed and implemented in practice, organizational behaviors relevant to the development of these policies remain to be investigated. A conceptual framework that can assist in systematically studying the policy process may facilitate this. Our Behavior Change Ball adds significant value to existing public health policy frameworks by incorporating multiple theoretical perspectives, specifying a set of organizational behaviors and linking the analysis of these behaviors to intervention functions and policy categories. We would encourage examination by others of our framework as a tool to explain and guide the development of integrated policies for the prevention of wicked public health problems.

## Background

This article addresses key questions that arise within the context of integrated public health policies (e.g., ‘Healthy Public Policy’ or ‘Health in All Policies’ (Storm et al., 2007; Kickbusch et al., 2008; Kickbusch, 2009; Hendriks et al., 2014) and introduces a conceptual framework to study and guide their development. In many countries, such policies are developed by local policymakers who work within local governments (i.e., municipal authorities) (Bossert, 1998; Atkinson et al., 2000; PAHO, 2007; Rijksoverheid, 2008; Vereniging van Nederlandse Gemeenten, 2009; Warner and Gould, 2009; Local Government Association, 2011; Rijksinstituut voor Volksgezondheid en Milieu, 2011; Department of Health, 2012; Storm et al., 2012), so we focus on policy development at the local government level. We focus on policies that aim to prevent ‘wicked’ public health problems (Rittel and Webber, 1973; Head, 2008) (e.g., childhood obesity (Butland et al., 2007)), since such problems defy traditional *intrasectoral* problem-solving approaches and therefore require innovative integrated approaches in which health and non-health sectors collaborate (i.e., *intersectoral* collaboration) (Yach et al., 2005; Head and Alford, 2008; Kickbusch, 2009; Hendriks et al., 2014).

Despite differences between countries or between the states of federal countries in the involvement of national or provincial governments, the roles, functions, and types of governance structures (The Council of European Municipalities and Regions, 2012) and in policy approaches to public health problems (e.g., smoking or gun control), the core of policy development for wicked public health issues remains similar in most countries (Australian Government, 1998; Department of Health, 2012; Sebelius, 2012; Bach and Stroleny, 2013). In the Netherlands, for example, the national government sets priorities every four years that are then operationalized (i.e., developed into a health policy document) by local policymakers (Rijksoverheid, 2008; Rijksinstituut voor Volksgezondheid en Milieu, 2012) while in the United States, most policy priorities are set by state (rather than national) government and then operationalized by local policymakers (Buse et al., 2005; Sebelius, 2012). The core of public health policymaking with respect to wicked problems remains the need to implement an integrated approach aimed at collaboration between different (health and non-health) sectors. Assisting local policymakers, public health professionals and researchers in developing and implementing integrated public health policies requires a conceptual framework to study and guide this development and implementation effort (Storm et al., 2007; Harting et al., 2011), so our goal was to develop such a framework.

Our framework was mainly inspired by the ‘Behavior Change Wheel’ (BCW) (figure 3.1) that was recently presented by Michie et al. (2011). Since the BCW was developed from an extensive review of existing frameworks and has been tested in other theoretical domains (primary implementation) (Michie et al., 2011; Cane et al., 2012), it provided a sound basis for the development of our own framework. We extended the BCW so it could be used as: a practical tool to assist local policymakers and those who support them in overcoming barriers to developing

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and implementing integrated public health policies to prevent wicked public health problems; and as a theoretical tool to drive empirical research and stimulate theory development in the field of local integrated public health policies to prevent wicked public health problems.

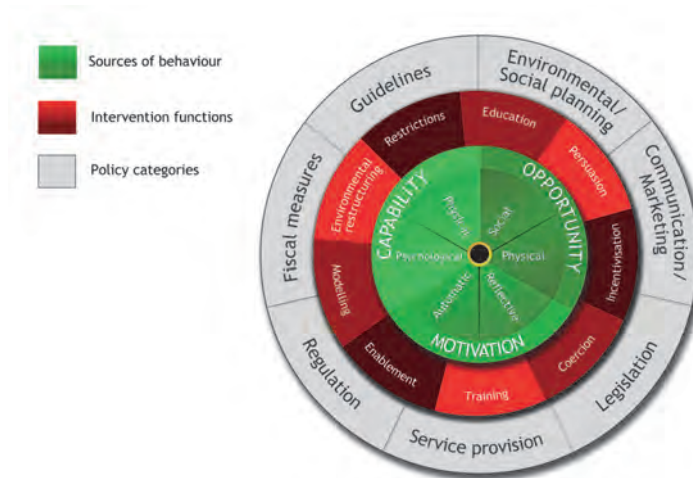


Figure 3.1 The Behavior Change Wheel from Michie et al. (2011)

The development of our framework was guided by the research question: *‘How are integrated public health policies for the prevention of wicked public health problems developed?’* Data were collected among policy actors and categorized into ten organizational behaviors expected to be at the core of policy development.

The aims of this paper are: to reflect on the complexity of making integrated public health policy for wicked public health problems; to reflect on the context in which integrated public health policies for wicked public health problems are developed; and to introduce a framework (i.e., The Behavior Change Ball) for the development and implementation of integrated public health policies. To illustrate the Behavior Change Ball (BCB), we use the development of public health policies for childhood obesity prevention at the local government level as an example throughout this article.

### **Why focus on childhood obesity prevention through integrated public health policies?**

Prevalence rates of childhood obesity have doubled over the last three decades, and approximately 170 million children (<18 years) worldwide are now estimated to be overweight or obese (Lobstein et al., 2004; Schönbeck and Van Buuren, 2010; World Health Organization, 2013a). Childhood and adolescent obesity is associated with poorer subjective as well as objective health (Berenson et al., 1998; Britz et al., 2000; Kraig and Keel, 2001; McGill et al., 2001; Puhl and Brownell, 2001; Rocchini, 2002; Neumark-Sztainer, 2002; Schwimmer et al., 2003; Duncan et al.,

2004; Daniels, 2006; Analitis et al., 2009; Okosun et al., 2010; Visness et al., 2010; Ottova et al., 2011; Berentzen et al., 2014; Marcus et al., 2012; Sinatra, 2012) and often tracks into adulthood (Freedman et al., 2005). Consequently, it causes huge rises in healthcare costs, affecting economic growth (Van Baal et al., 2006; Gortmaker et al., 2011; Mayer-Foulkes, 2011). In view of these consequences, governments are increasingly focusing their attention on preventing childhood obesity (e.g., Gortmaker et al., 2011; Mayer-Foulkes, 2011). However, though much research is available on the determinants of childhood obesity, it has not yet been clearly established how this information can be used to develop effective prevention approaches (Han et al., 2010). The complex interactions between so-called 'thrifty genes' (Neel, 1962), consumerist life-styles and 'obesogenic' urban environments (Swinburn et al., 1999), make it difficult to decide on the right avenue for prevention (Kremers et al., 2006).

Experts argue that significant health improvements can be achieved by focusing on factors at *all* levels of society within *and* outside the health sector (Raphael, 2003; Kreuter et al., 2004; Kickbusch et al., 2008; Kickbusch 2009; Weber and Khademian, 2008; Gortmaker et al., 2011; Storm et al., 2007, 2010, 2012; Roberto et al., 2015); they therefore recommend that governments implement so-called 'integrated approaches' (including integrated policies) that are characterized by a combination of coordinated interventions by multiple organizations and sectors, and are developed through intersectoral collaboration (i.e., collaboration between the most relevant sectors within and outside the health domain to improve public health) (Storm et al., 2007, 2010, 2012; Hendriks et al., 2014; Roberto et al., 2015).

Examples of policies developed through intersectoral collaboration are preventing the establishment of fast food restaurants near schools and increasing the safety of playgrounds in deprived neighborhoods. Such policies can only be implemented if zoning policies (policies that regulate the size, type, structure and use of land or buildings in designated areas) developed by the department of spatial planning are aligned with the goals of the public health department (see the report of the National Taskforce on Obesity (2005) for 93 examples of such policies). Since such integrated policies have the potential to decrease the availability of energy-dense cheap foods and increase children's physical activity levels, their development is of great interest to those who seek to prevent wicked public health problems such as childhood obesity (Kahn et al., 2009; Wells, 2012a). In practice, however, a wide range of content- and process-related factors (table 3.1) (Holling, 1978; Hoffman et al., 1981; Alter and Hage, 1993; Watson and Johnson, 1998; Blakely et al., 2000; Paulus, 2000; Borins, 2001; Lasker and Weiss, 2001; Schwartz and Puhl, 2003; Isett and Provan, 2005; Verduin et al., 2005; Nestle, 2006; Axelsson and Axelsson, 2006; Dorfman and Wallack, 2007; Jansen, 2007; Head, 2008; Head and Alford, 2008; Rijksoverheid, 2008; Bovill, 2009; Romon et al., 2009; Hunter, 2009; Warner and Gould, 2009; Han et al., 2010; Jansen et al., 2010; National Institute for Health and Clinical Evidence, 2010; Woulfe et al., 2010; Aarts et al., 2011a; Breeman et al., 2011; Harting et al., 2011; Jones, 2011; Peeler et al., 2011; Steenbakkers et al., 2011; Steenbakker, 2012; Trivedi et al., 2012; Hendriks et al., 2013a, 2015a,b) appear to hamper the development and implementation of integrated public health

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policies for such wicked public health problems (Sindall, 1997; Bacigalupe et al., 2010, Kickbusch and Gleicher, 2012).

Table 3.1 Barriers regarding development and implementation of integrated public health policies, as reported in the literature

<b>Content-related barriers</b>	<b>Reference</b>
Lack of awareness of the childhood obesity problem in non-health sectors.	Aarts et al. (2011a)
The Dutch Law on Public Health has decentralized the public health tasks to local governments. With regard to jurisdiction, the public health policy domain has a position similar to other jurisdictions such as public safety. In practice, however, public health is not a dominant policy domain: resources for public health are limited, and other jurisdictions (e.g., public safety) are considered important issues, while health promotion is considered less interesting, depending on the political priority given to certain policy domains.	Law on Public Health (2008) Breeman et al. (2011) Steenbakkens (2012)
'Wicked' nature of obesity makes it very unattractive to invest in its prevention.	Head (2008) Head and Alford (2008)
Decreasing the incidence of childhood obesity is very unlikely within the short timeframe in which most politicians work (determined by election frequencies).	Head (2008) Aarts et al. (2011a) Romon et al. (2009) Blakely et al. (2000)
Difficulty of developing consensus about ways to tackle the problem due to the lack of hard scientific evidence about effective solutions.	Han et al. (2010) Aarts et al. (2011a) Head (2008) Trivedi et al. (2012) National Institute for Health and Clinical Evidence (2010)
Framing of childhood obesity (especially by neo-liberal governments) as an individual health problem instead of a societal problem. Responsibility for achieving healthy-weight promoting lifestyles is thus shifted completely away from governments to individual children and their parents.	Hunter (2009) Dorfman and Wallack (2007) Schwartz and Puhl (2003)
Lack of political support. Ambiguous political climate: governments do not seem eager to implement restrictive or legislative policy measures since this would mean they have to confront powerful lobbies by private companies. Lack of presence of champions and political commitment	Aarts et al. (2011a) Nestle (2006) Peeler et al. (2010) Verduin et al. (2005) Woulfe et al. (2010) Bovill (2009) Hendriks et al. (2015b)
<b>Process-related barriers</b>	
Local government officials lacking the knowledge and skills to collaborate with actors outside their own department.	Steenbakkens (2012)
Insufficient resources (time, budget).	Aarts et al. (2011a) Steenbakkens (2012) Woulfe et al. (2010)
Lack of membership diversity in the collaborative partnerships, resulting in difficulties of implementation.	Woulfe et al. (2010)
Lack of clarity about the notion of intersectoral collaboration.	Harting et al. (2011)

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Not being clear about the aims and added value of the intersectoral approach.	Bovill (2009)
Top-down bureaucracy and hierarchy, disciplinarity and territoriality, sectoral budgets, and different priorities and procedures in each sector.	Bovill (2009)
Inadequate organizational structures.	Steenbakkers (2012) Woulfe et al. (2010) Alter and Hage (1993) Hunter (2009) Warner and Gould (2009)
Poor quality of interpersonal or interorganizational relationships.	Woulfe et al. (2010) Isett and Provan (2005)
Top management not supporting intersectoral collaboration. Lack of involvement by managers in collaborative efforts.	Bovill (2009) Steenbakkers et al. (2011) Hendriks et al., (2015a)
Lack of common vision and leadership.	Woulfe et al. (2010) Hunter (2009)
Innovation in local governance is hampered by: <ul style="list-style-type: none"> <li>- asymmetric incentives that punish unsuccessful innovations much more severely than they reward successful ones</li> <li>- absence of venture capital to seed creative problem solving</li> <li>- disincentives lead to adverse selection: innovative people choose careers outside the public sector.</li> </ul>	Borins (2001)
Adaptive management – flexibility of management required, focusing on learning by doing.	Head and Alford (2008) Holling (1978)
Lack of communication and insufficient joint planning.	Axelsson and Axelsson (2006)
Hierarchical governance instead of network governance	Warner and Gould (2009)
Barriers are related to the ‘niche’ character of the sectors involved. Achieving the unique advantage of collaboration, which is referred as ‘synergy,’ is harder in diverse groups, but at the same time such diverse groups have the potential to lead to greater synergy compared to collaboration within homogeneous groups.	Jansen (2007) Jones (2011) Lasker and Weiss (2001) Watson and Johnson (1998) Hendriks et al. (2013a) Hoffman et al. (1981) Paulus (2000)
Implementation not being considered a dominant part of the planning and policy process	Bovill (2009)



### **Which theories can explain integrated policy development, and what are their limitations?**

A wide range of theories can be used to explain the development of integrated public health policies (Storm et al., 2007; Harting et al., 2011). Some theories describe a continuum of integration (e.g., Konrad, 1996; Himmelman, 2002; Emerson et al., 2011; Brown et al., 2012; while others focus on intersectoral, cross-sectoral or multi-sectoral collaborations, coalitions and partnerships (e.g., Gray, 1985; Blockson, 2003; Dowling et al., 2004; Wagemakers et al., 2010). In addition, there are theories with a broader focus, which can also be applied to understanding intersectoral collaboration, such as individual behavior change theories (e.g., Ajzen, 1991), diffusion and implementation theories (e.g., Paulussen et al., 2007; Rogers, 2003), and organizational change theories (e.g., Senge, 1990). Other theories describe processes of policymaking: coalition theories (Sabatier, 1988; Sabatier, 1991) focus on the role of policy subsystems, while technocratic (Putters, 2005; Bressers and Hoogerwerf, 1995), garbage-can (Cohen et al., 1972; Kingdon, 2003), and incremental models (Lindblom, 1959) describe how policies are developed.

Each of the above theories offers unique and useful insights, but they have three important limitations, making it difficult to apply them satisfactorily to the local government setting. First of all, most of these theories apply only to specific aspects of collaboration, and together do not provide a comprehensive approach. Kingdon's stream theory (2003), for example, is very useful for the conceptualization of agenda-setting, which is an important part of the policymaking process, but it is not able to account for other parts of the policy process (e.g., implementing policy solutions). Although such theories are very useful for fundamental research (in which the creation of immediately useful knowledge is not the primary purpose) (Corey, 1949; Susman and Roger, 1978; Huxham, 2003), action-oriented researchers and especially the policymakers themselves need 'actionable knowledge' (Small and Utalll, 2005), i.e., knowledge that can guide the way to solutions after barriers or facilitators within the process have been identified.

A second limitation is that most of the theories are based on research within *organizational* settings rather than within *governmental* settings. Although we recognize that local governments are also organizations, the conditions in non-governmental organizations are very different from those in local governments, so research results derived from non-governmental settings cannot be directly transferred to that of local government (Borins, 2001; LaPalombara, 2001; Rousseau and Fried, 2001). For example, local policymakers have to work within a context: of policies that are delegated to them by national governments; of a democratic political system leading to changes in government policies after every new parliamentary election, making it difficult to work towards long-term goals; in which mistakes made by the authorities are highlighted in the media since citizens are critical about the way governments spend their tax money, so tolerance of errors is low; with a far more hierarchical organizational structure than that of a typical non-governmental organization; and in which policy implementation is

often not under their own control or in their own interest, while in non-governmental organizations, policies are usually implemented by the same organization that has developed them (LaPalombara, 2001; Bovill, 2009).

A third limitation of theories to explain the development of integrated public health policies is that most policymaking models are developed for simple or fairly uncomplicated public health problems (i.e., tame problems); such policy models fail to take into account the factors that make policy development for complex public health problems (i.e., wicked problems) difficult (Putters, 2005; Head and Alford, 2008; Humphreys et al., 2009). Current policy models usually distinguish among several policymaking stages, such as problem definition, selecting policy solutions, gaining political and public support for the policy solution, policy implementation, evaluation of the policy, and dissemination of effective policies (Putters, 2005; Rijksinstituut voor Volksgezondheid en Milieu, 2011). These stages represent the practice of policy formulation when clear policy goals can be established, adequate information is available, and appropriate methods can be chosen that can lead to activities that efficiently and effectively achieve these goals. However, these preconditions are violated when policies for the prevention of wicked public health problems are developed. Since neither the problem nor the solution is perceived in the same way by the many different parties involved (Head and Alford, 2008), current policymaking models cannot be satisfactorily used to explain the development of policies for such problems within local governments.

To overcome these limitations, we developed a more comprehensive conceptual framework. Although some researchers have argued that it is unlikely that a single comprehensive framework can be developed (Harting et al., 2011), progress in this field can only be made if researchers are willing to invest effort in developing such a framework.

### **Which theories provided the basis of our current framework?**

We used two conceptual models as the basis of our framework. Following Jansen (2007), we distinguished categories of local policymakers (e.g., strategic, tactical and operational levels), and we also adopted the core concepts of the BCW (capability, opportunity, motivation, and behavior, or 'COM-B'; intervention functions, policy categories, and the relationships between them) (Michie et al., 2011). In addition, we integrated theories from political and policy science, organizational science, marketing, psychology, and health science (Lindblom, 1959; Cohen et al., 1972; Gray, 1985; Sabatier, 1988, 1991; Senge, 1990; Ajzen, 1991; Bressers, 1995; Konrad, 1996; Himmelman, 2002; Blockson, 2003; Kingdon, 2003; Rogers, 2003; Dowling et al., 2004; Putters, 2005; Paulussen et al., 2007; Wagemakers et al., 2010; Emerson et al., 2011; Brown et al., 2012) to achieve a cross-fertilization that might lead to new insights.

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### **Extensions to the Behavior Change Wheel**

Our main inspiration was the Behavior Change Wheel (BCW) by Michie et al. (2011) (figure 3.1). This framework was developed from an extensive review of existing frameworks, and has been tested in other theoretical domains (primary implementation) (Cane et al., 2012). The function of the BCW is to link an analysis of target behavior (the 'B' from the COM-B model of behavior) to intervention functions and policies.

When we tried to apply the BCW to our target population, i.e., local policymakers, however, we encountered a limitation of the BCW with regard to our context. In our context, local policymakers, public health professionals and researchers would first need to define which organizational behaviors need to be introduced, reinforced or replaced for the development and implementation of integrated public health policies. We considered that pre-defining a set of organizational behaviors based on theories might support the users of the framework. The current framework thus builds on the principles of the BCW, but modifies the 'behavioral goals' by specifying relevant organizational behaviors and linking them to policymakers at the strategic, tactical and operational levels.

We wanted to provide a theoretical framework that could function: as a practical tool to assist local policymakers and those supporting them in overcoming barriers to developing and implementing integrated public health policies to prevent wicked public health problems; and as a theoretical tool to drive empirical research and stimulate theory development in the field of local integrated public health policies to prevent wicked public health problems. We therefore decided to extend the BCW in three ways, which are outlined below.

#### **Extension 1: different target population**

In contrast to Michie et al. (2011), who applied the BCW to the behaviors of the traditional target population of health-promoting interventions (i.e., intermediaries and the ultimate target group of people who are assisted in a health behavior change process), we had a target population consisting of the 'enablers' of health promotion interventions, namely local policymakers. Furthermore, since our target population is tied to the organization in which they work (the local government) we decided to refer to their behavior as 'organizational behavior' rather than just 'behavior' (Robbins and Judge, 2011). These organizational behaviors may consist of collective and individual behaviors and can also be seen as critical factors or processes for the development and implementation of integrated public health policies.

### **Extension 2: adding a second function**

By adding organizational behaviors that are indicative of an integrated approach, the 'hub of the wheel' becomes not only a heuristic tool (linking an analysis of behavior to theory-based interventions and policies) but also a diagnostic tool within the context of local government. Thus, the original goal of the BCW (heuristic) has been extended by a second function: providing a structure to categorize the most important aspects of an integrated approach (i.e., functioning as a diagnostic tool), as depicted in the yellow parts of the model (figure 3.2). To include such a diagnostic function, it was necessary to pre-define a set of organizational behaviors that will enable an assessment of the current situation in local government organizations with regard to the development and implementation of integrated public health policies.

### **Extension 3: adding a third dimension**

Since *each* of the concepts in our framework can strengthen the initiation, implementation and continuation of effective policies, the dynamics of the political and obesity-related environmental context prompted us to use the metaphor of a ball that is rolling around in a mountainous landscape (figure 3.3). This metaphor could explain why current implementation attempts have often failed. The steep hills surrounding the ball reflect the systems' resistance to change; the forces of gravity make it difficult to roll a ball towards a mountain peak. Therefore, we decided to 'reinvent the wheel' (which is two-dimensional) and develop it into a ball (three-dimensional). The metaphor of a ball moving through a landscape has also been applied successfully in other research areas to reflect the dynamics that are at work in complex systems (Magnusson and Stattin, 2006; Thelen and Smith, 2006). In the following sections, we present our proposed framework, the 'Behavior Change Ball,' with which we aim to enhance empirical research grounded in theory.

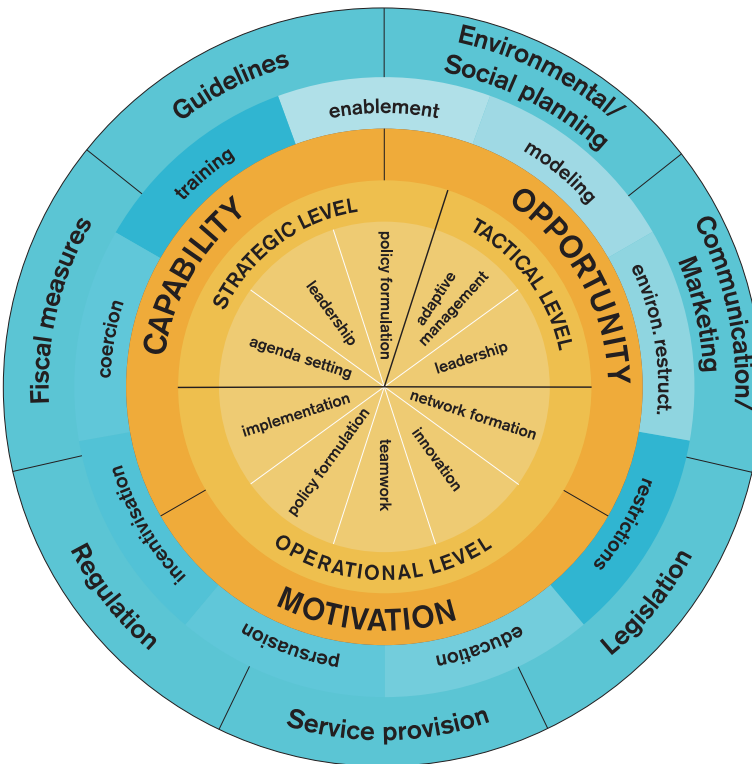


Figure 3.2 The Behavior Change Ball, adapted from Michie et al.'s (2011) Behavior Change Wheel: The yellow parts of the framework depict the diagnostic function of the framework: an assessment of the policy context in which integrated public health policies should be developed and implemented. The blue parts depict the heuristic function of the framework: based on the diagnosis, the framework guides the way to solutions (interventions and policies). Compared to the Behavior Change Wheel, the Behavior Change Ball also specifies organizational behaviors and relates them to the most relevant actors, categorized into three hierarchical levels that can be found in local governments; these are displayed as 'wedges' (agenda-setting, leadership, strategic level policy formulation, adaptive management, network formation, innovation, teamwork, operational level policy formulation, and implementation) and levels (operational, tactical, strategic). In the Behavior Change Wheel, the 'wedges' are not specified, but are displayed as a black dot at the center, which reflects a single specific behavioral goal. Our specification of the behavioral goals into ten wedges adds a second function to the Behavior Change Wheel,

## Proposing a conceptual framework

making our framework more comprehensive, which is what we needed to explain and guide the development and implementation of integrated public health policies.

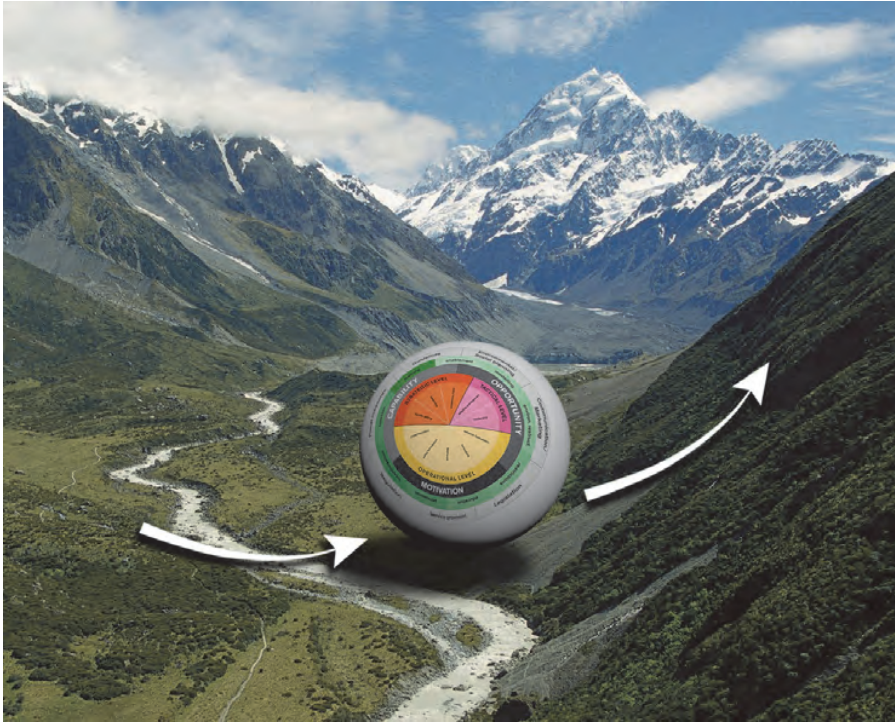


Figure 3.3 The landscape and the Behavior Change Ball: The proposed relationships between the theoretical concepts from the Behavior Change Ball are best illustrated by the metaphor of a ball moving through a landscape.

## The Behavior Change Ball

Before outlining the components of the 'Behavior Change Ball' (BCB) (COM-B, intervention functions, and policy categories) and its application, we describe its development and target group.

### How was the framework developed?

To identify the ten organizational behaviors (displayed in the wedges) that need to be carried out by certain levels of local policymakers, we interviewed local policymakers at strategic, tactical, and operational levels within several Dutch local governments, attended meetings of the Public Health Service in one Dutch region, developed theoretical reflections (Lindblom, 1959; Cohen et al., 1972; Gray, 1985; Sabatier, 1988, 1991; Senge, 1990; Ajzen, 1991; Bressers, 1995; Konrad, 1996; Himmelman, 2002; Blockson, 2003; Kingdon, 2003; Rogers, 2003; Dowling et al., 2004; Putters, 2005; Paulussen et al., 2007; Wagemakers et al., 2010; Emerson et al., 2011; Brown et al., 2012) and held discussions with experts in the field of integrated public health policy development, politics, and intersectoral collaboration. We related the organizational behaviors to the organizational levels



at which the behavior needed to be carried out. For example, we found that agenda-setting is controlled by local policymakers at the strategic level (e.g., the municipal executive), while local policymakers at the tactical level (e.g., heads of departments) are responsible for adaptive management. By categorizing these organizational behaviors, we aimed to integrate them into one comprehensive framework. After having designed an early version of this framework, we discussed it with experts and key informants. Based on their recommendations, we adapted the framework where necessary. To increase the generalizability of our framework, to improve the construct definition of its concepts, and to raise the data to a theoretical level, we constantly compared our data with relevant literature and similar or alternative frameworks. The outcome of this inductive and iterative research process was our conceptual framework (figures 3.2, 3.3 and 3.4) (Eisenhardt, 1989).

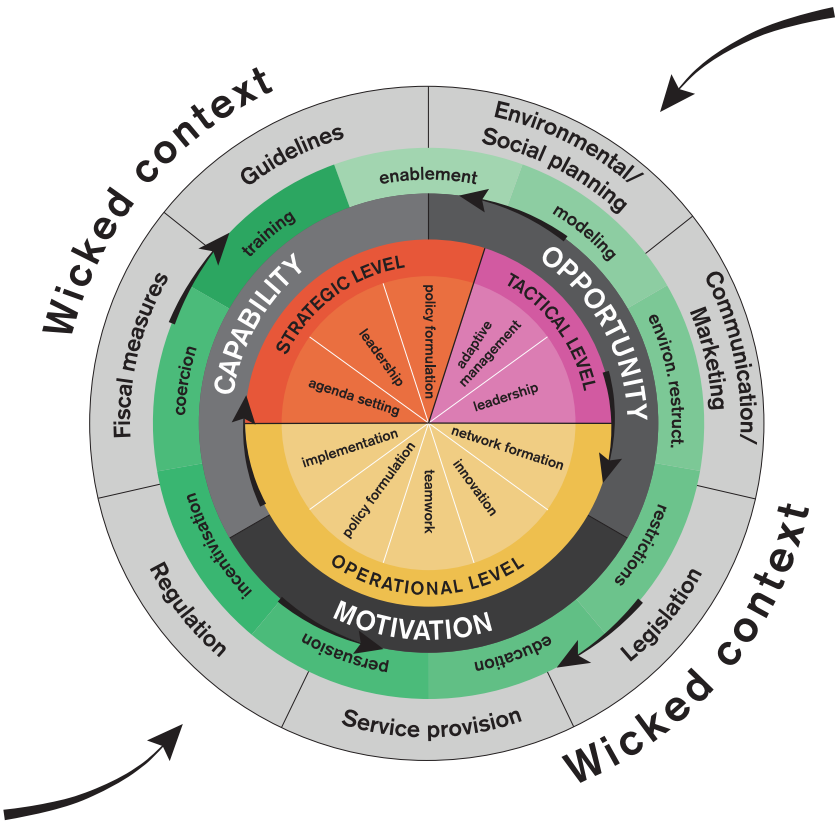


Figure 3.4 All circles can rotate independently: The Behavior Change Ball consists of circles that reflect organizational behaviors, actors within three hierarchical levels, determinants of organizational behaviors, interventions, and policies or programs. Policies or programs enable interventions, and determinants are necessary for each of the organizational behaviors that are related to actors at the operational, tactical, or strategic level.

### **Who are the target group of the framework?**

The target group of our framework consists of the local policymakers who are involved in developing integrated public health policies. Local policymakers work within a complex environment in which members of the municipal executive and local politicians (strategic level) direct local government managers (tactical level) and professionals (operational level) towards the development and implementation of certain policies. They can be divided into three levels reflecting the kind of decisions they make (Jansen, 2007; Steenbakkers, 2012).

Simply stated, policymakers at the strategic level (the municipal executive, known in the Netherlands as the College of Mayor and Aldermen) decide 'what will be done within the organization,' while tactical level policymakers (heads of departments) decide 'how (and sometimes also when) it will be done' (e.g., which preconditions have to be fulfilled), and operational level policymakers (civil servants) decide 'who will do what and when' (e.g., how to achieve a goal). These levels are related to the traditional levels of top management, middle management, and operational management (Anthony, 1965), or Mintzberg's (1993) strategic apex, middle line, and operational core. To develop integrated public health policies, these three levels should collaborate vertically (between levels) as well as horizontally (between the sectors within one level) (Jansen, 2007; Steenbakkers, 2012).

Despite attempts to involve the ultimate (e.g., children and their parents) and intermediate (e.g., commercial organizations within the community) target populations of health-promoting interventions in the process of developing policies, they are at a greater distance from the policymaking process than the local policymakers themselves (Lukes, 1974; Eversole, 2012). Therefore, we do not regard them as our key target group, but as external influences; they include, for example, international ambassadors for childhood obesity prevention (like Michelle Obama), experts advising the local policymakers, and other levels of government (national, state, provincial, international).

### **Which organizational behaviors encourage integrated health policies to be developed?**

Ten wedges, displayed at the hub of the ball, represent a categorization of ten organizational behaviors (e.g., agenda-setting) that are relevant to the development of integrated public health policies. We decided to categorize the organizational behaviors to a specific level of local policymakers. For example, agenda-setting is formally the responsibility of the municipal executive and therefore categorized under the strategic level in our proposed framework. Although we acknowledge that others can influence agenda-setting (e.g., by reminding the executive to think about childhood obesity prevention), they are not officially in charge of it, and are therefore considered external influences situated in other parts of our proposed framework (e.g., as determinants or interventions). Each of the organizational behaviors is discussed in more detail below.



### **Organizational behavior 1: agenda-setting at the strategic level**

A new policy can only be developed if a problem attracts enough attention to appear on the political agenda (Kingdon, 2003). Agenda-setting is defined as: *'the first stage of the public policy process during which some issues are given attention by policymakers and others receive minimal attention or are neglected completely'* (Schiffman, 2007, p. 796). In the case of childhood obesity prevention by means of integrated approaches, many agendas need to be set. Compared to mono-sectoral approaches, a much wider and more diverse group has to develop a shared vision, agree upon a strategy, and decide to invest resources (World Health Organization, 2003a; Schiffman, 2007). Only then do lower level, local policymakers (the tactical and operational levels) feel facilitated to elaborate on this shared vision (Kotter, 1995). A policy entrepreneur can stimulate agenda-setting (Kingdon, 2003; Hoeijmakers et al., 2007). For example, a local alderman might visit a neighboring municipality and inspire them to give priority to childhood obesity prevention.

### **Organizational behavior 2: leadership at the strategic level**

Leadership can be defined as: 'a process of social influence' (Parry and Hansen, 2007). Such influence is especially important for the prevention of public health problems, since the benefits of prevention only become visible in the long run. Prevention is therefore not of great interest to most politicians, who tend to work with shorter time frames (LaPalombara, 2001; Bovill, 2009; Bacigalupe et al., 2010). To overcome this lack of interest, leaders in the effort to improve public health should be politically aware and skilled in formulating a clear, integrated vision of the public health problem: when defining the problem of childhood obesity, leaders need to emphasize the wicked nature of obesity and guide the search for systemic solutions (Hunter, 2009; Finegood, 2012). For example, an alderman can emphasize that we all have created an 'obesogenic environment' and that overweight children and their parents are not solely to blame.

### **Organizational behavior 3: policy formulation at the strategic level**

Formulating policies is the *raison d'être* of governments; it is the process of translating agenda topics into a set of policy measures (McGee, 2001). Policies can be formulated at the various governmental levels, each with its own goals (Whitehead, 1998). This section focuses on policies at the strategic level. Strategic level policies set out the vision and strategy for a problem, guide the debate and set out the tasks for local policymakers at the lower levels of the municipal hierarchy (the tactical and operational levels). They are symbolic and aim to motivate people or create momentum, and can give agenda topics a permanent character by securing resources (Whitehead, 1998; Kingdon, 2003). For example, the program proposed by the municipal executive might include a section securing the resources that will be invested in implementing the integrated approach towards overweight prevention.

**Organizational behavior 4: adaptive management at the tactical level**

The management of wicked public health problems requires an adaptive approach, which is characterized by an emphasis on learning from available evidence and utilizing this evidence in experiments (Holling, 1978; Batie, 2008; Brunner, 2010). This is especially important when addressing problems such as obesity, since most 'solutions' for childhood obesity prevention are not yet firmly rooted in scientific evidence (Han et al., 2010). Adaptive management is an instrument that is used to change and learn about the system (Holling, 1978). This implies that heads of departments, who are the day-to-day managers of the officials working in local government, should adopt an open and learning attitude and involve people such as researchers to evaluate their policies. Such an attitude stimulates the creativity of local policymakers at the operational level, which is needed for the development of innovative policies (Senge, 1990; Kotter, 1995). For example, when managers are skeptical toward new working methods, such as intersectoral collaboration, new experiences will not be created, and officials will not learn new collaboration skills.

**Organizational behavior 5: leadership at the tactical level**

Leadership at the tactical level is important since the integrated approach to childhood obesity prevention requires that policies are developed in a new way, viz. through *intersectoral* rather than *intrasectoral* collaboration. Officials from different policy sectors (e.g., spatial planning and public health) should have the opportunity to jointly lead the process of development and change (Harris and Spillane, 2008). Leadership by the heads of the departments is expected to be very important to facilitate this change process; they should support their subordinates in producing innovations (Kotter, 1995). For example, a manager might create new performance indicators that also incentivize officials who have successfully implemented initiatives for the integrated approach; this can create a culture in which others might also want to collaborate.

**Organizational behavior 6: network formation at the operational level**

A network is defined as: *'a group of interdependent but autonomous actors that come together to produce a collective output (tangible or intangible) that no one actor could produce on its own'* (Alter and Hage, 1993). Networks that also involve non-health sectors should be formed to implement the integrated approach (Kickbusch, 2009; Warner and Gould, 2009; Storm et al., 2012). To attract these non-health stakeholders, actors from the health sectors should move out of their 'comfort zone' and 'niche' (Jansen, 2007, 2012). For example, spatial planning officials should be involved in the implementation of certain policies that require changes to physical environments. Additionally, such networks can boost agenda-setting by mobilizing actors and increasing the collective capacity to confront opponents (Kingdon, 2003; Kickbusch et al., 2008).

### **Organizational behavior 7: innovation at the operational level**

Innovation is currently very important within the policy context, since the traditional ways of solving childhood obesity problems have failed (Lobstein and Bauer, 2005). Innovators are the gatekeepers for the introduction of new ideas into the network. They are defined as: 'the first individuals to adopt an innovation' (Rogers, 2003). Innovation is becoming increasingly important in the policy process since national governments are encouraging local governments to implement integrated policies through public-private partnerships (Huang et al., 2015). In attempts to achieve such changes, an innovator may be the key to the exchange of new ideas between public and private organizations and may bridge the gaps between them. For example, officials might be motivated to use their contacts with the local supermarket to implement some of their policy ideas, but might need to overcome resistance from others within the organization who are afraid that the risk of failure of such collaboration is too high.

### **Organizational behavior 8: teamwork at the operational level**

Based on the initiatives developed by the network, the core of the network should take further initiatives through 'teamwork': *'a set of interrelated thoughts, actions, and feelings of each team member that are needed to function as a team and that combine to facilitate coordinated, adaptive performance and task objectives resulting in value-added outcomes'* (Salas et al., 2005). Currently, actors in the public health services are not yet fully accustomed to working in teams that include local policymakers from different policy sectors, and thus are confronted by a totally new way of working. To be able to capitalize on their knowledge and skills (West, 2002), they need other 'new' competencies and tools (Bridges, 2003; Campell, 2008; Mellaard and Spanbroek, 2008; Steenbakkers, 2012), for example, spanning boundaries between problems and solutions, and bringing diverse partners together.

### **Organizational behavior 9: policy formulation at the operational level**

Teamwork by local policymakers and other relevant stakeholders results in decisions being made on the way strategic policies are translated into operational policies (i.e., 'work' or 'action' plans). They are action-oriented instead of symbolic. In contrast to strategic policies, operational policies translate the policy goals into concrete actions ready for implementation. Operational planning documents should describe the policy goals, instruments, and actions in a specific, measurable, acceptable, realistic, and time-bound (SMART) format (Whitehead et al., 1998), for example by describing when a law will be implemented that bans vending machines from primary schools.

### **Organizational behavior 10: implementation at the operational level**

Policies can only impact childhood obesity rates when they are implemented properly, so it is very important that implementation is considered a part of the planning and policy process (Bovill, 2009). Although this seems like stating the obvious, governments are usually judged on their policy documents rather than on the implementation of their policies (LaPalombara, 2001; Steckler et al., 2002; Bovill, 2009). Lack of implementation is therefore a commonly cited problem in

the governmental context (Bovill, 2009). Usually, a package of policy measures is developed by policymakers, but in the subsequent implementation stage, most of the measures need to be implemented by other actors than the local policymakers themselves (LaPalombara, 2001). It is therefore important to involve outside stakeholders in policy development at an early stage (Steckler et al., 2002; Rogers, 2003; Verduin et al., 2005; Paulussen et al., 2007) and to regularly evaluate implementation efforts to tackle current implementation obstacles and anticipate potential barriers for continuation (Steckler et al., 2002; Rogers, 2003; Paulussen et al., 2007).

### **What determinants need to be present to achieve a particular organizational behavior?**

The second circle of the model displays three categories of interrelated determinants of behavior: capability, opportunity, and motivation (COM) (Michie et al., 2011) (figure 3.5). These determinants are needed for each of the ten organizational behaviors to occur. Other research fields such as marketing (e.g., Rotschild, 1999), health sciences (e.g., The Health Council, 2002), political and policy science (e.g., Kingdon, 2003), and implementation science (e.g., Cane et al., 2012) also use this categorization. Capability, opportunity, motivation, and behavior ('COM-B') are united in a 'behavioral system'; if determinants are insufficiently present, COM-B may not function appropriately, and the behavior may not be established.



Figure 3.5 The COM-B model

### **How are the determinants conceptualized?**

'Capability' is the extent to which individuals can adapt to change, generate new knowledge, and continue to improve their performance (Fraser and Greenhalgh, 2001): 'capability is what people are able to do and to be' (Sen, 1985). 'Psychological capability' refers to the ability to engage in the necessary thought processes, such as comprehension and reasoning, and is closely related to competence, which refers to what individuals know or are able to do (Fraser and Greenhalgh, 2001). Important aspects in the context of intersectoral collaboration are assumed to be boundary-spanning, collaboration, and leadership skills (Yip et al., 2008; Hunter, 2009). There is also a 'physical capability,' but this is not directly relevant to this paper (Michie et al., 2011).

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‘Opportunity’ refers to conditions that are external to the individual actor (Michie et al., 2011), that is, all social, political and organizational resources within a specified system that interact with the local policymakers (Rogers, 2003; Paulussen et al., 2007). Two forms of opportunity are distinguished: physical and social. ‘Physical opportunity’ is afforded by the environment (e.g., organizational structures). ‘Social opportunity’ refers to the milieu that dictates the way that we think about things, the words and concepts we use, and the predominant discourse (e.g., organizational culture) (Michie et al., 2011).

‘Motivation’ can be divided into reflective and automatic processes. ‘Reflective motivation’ involves reflective decision-making processes involving analytical choices or intentions (e.g., evaluation and plans) (Michie et al., 2011). An example is deciding to collaborate with other sectors since one has positive beliefs about intersectoral collaboration. ‘Automatic motivation’ involves processes in which emotions and impulses that arise from associative learning or innate dispositions lead to certain choices (Michie et al., 2011). Examples of automatic motivation are resistance to change or work engagement (Campbell, 2008; Bakker and Demerouti, 2009; Christian et al., 2011; Schaufeli, 2012).

### **Which interventions can influence the COM-B?**

If the COM-B is suboptimal, interventions might be needed to increase the likelihood that certain organizational behaviors are effectively accounted for (Michie et al., 2011; Hendriks et al., 2012). They are outlined below.

‘Education’ involves increasing knowledge and understanding (Michie et al., 2011). Since policy sectors are not always aware of the way their policies influence health (Aarts et al., 2011a), education might increase awareness among all policy sectors and stimulate intersectoral collaboration. An example of a tool to create such awareness is Health Impact Assessment (Manheimer et al., 2007; Hendriks et al., 2012).

‘Persuasion’ means that communication is used to elicit or enhance positive or negative feelings or to stimulate action (Michie et al., 2011). A national politician could, for example, persuade local, economically oriented politicians that obesity prevention is worth investing in because of the economic consequences of obesity in terms of work absenteeism in the future (Hendriks et al., 2012).

‘Incentivization’ means that expectations of rewards are created (Michie et al., 2011). Incentivization is based on marketing and learning theory principles of direct reinforcement (Bandura, 1977; Rotschild, 1999). Reward systems that are built into the organizational structure, such as bonuses, are an example of incentivization since they can stimulate individuals by offering financial rewards (Hendriks et al., 2012).

‘Coercion’ means the use of punishment or costs (Michie et al., 2011), for example to force municipalities to subject their policies to a Health Impact Assessment (Manheimer et al., 2007; Hendriks et al., 2012).

‘Training’ can be used to overcome skill-related problems (Michie et al., 2011). For example, attracting the right stakeholders for the development of integrated policies requires negotiation skills that might be trained (Hendriks et al., 2012).

‘Restriction’ refers to rules defining which behaviors are allowed or not allowed (Michie et al., 2011). Institutions incorporate not only *formal* rules but also *informal* rules that shape the behavior of those working in them and thus may hamper intersectoral collaboration (Peters, 2005). For example, performance management can restrict collaboration, especially when tight budgets result in a tendency to return to ‘core business’ (Hendriks et al., 2012).

‘Environmental restructuring’ is intended to change the social or physical context (Michie et al., 2011). Changes in the social context refer to changes in culture (e.g., pressure from the media), while changes in the physical context refer to changes in the structure (e.g., institutional arrangements) (Unger et al., 2000; Peters, 2005; Hendriks et al., 2012). A good example is the work of celebrity chef Jamie Oliver: media attention has enabled him to put the poor quality of school lunches on the political agenda.

‘Modeling’ provides an example that people can and like to copy (Michie et al., 2011). It is based on social learning theories (Bandure, 1977). Managers may act as a model for the type of collaboration they want to encourage across policy sectors (Hendriks et al., 2012; Steenbakkers, 2012), and well-known mayors like Michael Bloomberg (Frum, 2012) may act as models to invest in local obesity prevention through policies (Hendriks et al., 2012).

‘Enablement’ means creating new ways to deal with or remove barriers (Michie et al., 2011). At the strategic level, for example, a barrier to intersectoral collaboration, viz. ‘not having a shared goal,’ might be removed by an official having two policy sectors, such as spatial planning and public health, in their portfolio (Hendriks et al., 2012).

### **Which policies can enable the interventions?**

Nine policy categories are displayed in the outermost circle. They enable particular interventions and are outlined below (Michie et al., 2011).

‘Communication and marketing’ involves using print, electronic media, telephone or broadcast media (Michie et al., 2011). For example, in order to achieve broad political commitment for the prevention of childhood obesity, a local alderman might be appointed as ambassador.

‘Guidelines’ involve documents that recommend or mandate practice (Michie et al., 2011). An example might be using a contract to formalize network activities to make sure that commitments for investing in childhood obesity prevention are followed up.

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'Fiscal measures' involve the use of the tax system to reduce or increase the financial cost of certain activities that might affect childhood obesity, for example by subsidizing municipalities that develop and implement integrated public health policies. Such financial support can stimulate local governments to invest in intersectoral collaboration, since innovating current working practices often requires additional investment of resources (Rogers, 2003; Paulussen et al., 2007).

'Regulation' involves establishing rules or principles of behavior or practice (Michie et al., 2011). Pooling resources, for example, can be seen as a working principle that fosters intersectoral collaboration; when targets are set for the governmental system as a whole, officials from the economic or spatial planning departments can share resources with health sectors and therefore become direct stakeholders of public health.

'Legislation' involves making or changing laws (Michie et al., 2011). Laws aim to change behavior in a non-voluntary manner (Rotschild, 1999). An example is the Dutch law on public health; the Dutch national government obliges local governments to produce a health policy document every four years (Rijksoverheid, 2008), and the Health Care Inspectorate checks whether the laws are adhered to (Inspectie voor de Gezondheidszorg, 2010).

'Environmental or social planning' involves designing and/or controlling the physical or social environment (Michie et al., 2011). An example is giving attention to the design of the organizational structure so it does not obstruct intersectoral collaboration.

'Service provision' involves delivering services (Michie et al., 2011). Examples include offering specific training courses for civil servants who want to use social marketing to prevent obesity, or training courses on how to select evidence-based interventions.

### **How can the Behavior Change Ball be applied?**

The framework can be applied within local governments by local policymakers or those who assist them (e.g., action-oriented researchers or the staff of the JOGG program) to develop and implement integrated public health policy for the prevention of wicked public health problems. It can be applied for practical or theoretical purposes.

For practical purposes, the following four steps should be taken. First, identify the local policymakers' organizational behaviors that are described in the wedges of the ball (i.e., not assessing the COM-B from scratch as in the BCW); this assessment should identify which organizational behaviors need to be introduced, reinforced, or replaced. For example, it may become clear that childhood obesity prevention is not on the agenda of the aldermen who is responsible for it (agenda-setting). Second, based on the identification of the organizational behaviors that need attention, an analysis of the COM-B needs to indicate what might be an important avenue for improvement. For example, to set the agenda, the aldermen might first



need to be informed about the severity of childhood obesity (agenda-setting through increasing motivation). Michie et al. (2011) describe how to select appropriate interventions (third) and policies or programs (fourth) to change the COM-B. For example, communication (policy) enables modeling (intervention) and influences automatic motivation, which may lead to agenda-setting (organizational behavior) at the strategic level (our target population).

For theoretical purposes and to enable further study, the BCB can be used to structure or map data. For example, the BCB's constructs can be used as topic lists or coding systems, or to map data from observations, interviews, or policy documents. Applying the BCB may reveal the value of certain theories in explaining the development and implementation of integrated public health policies and thus provide directions for further research.

### **What are the limitations of this study?**

A limitation of this study is that the linkages it identifies between the organizational behaviors are based on one research study. Although we grounded the linkages in existing theoretical assumptions and literature, we acknowledge that they should be further tested. We therefore hope to inspire other researchers to conduct more theory-based empirical research to validate and refine the BCB. Another limitation of this study could be that this framework was developed in the Netherlands, and may thus not be valid for countries where local governments bear less responsibility for developing public health policies. Also, our categorization of local government actors might appear less appropriate in some countries, although similar categories frequently appear in other theoretical reflections. To increase the value of the framework, we have linked our categorization of policymakers (strategic, tactical and operational) to internationally familiar management concepts (Anthony, 1965; Mintzberg, 1993).

### **What are the directions for future research?**

By introducing the BCB in the field, we aim to stimulate local policymakers and those who support them (e.g., researchers) to think about the organizational behaviors that are relevant to developing and implementing integrated public health policies. We want to strengthen the evidence base regarding the reality of policy formulation and implementation, and therefore recommend that researchers apply the BCB in case study designs or narrative inquiries. Such research designs are seen as most appropriate due to their potential to illuminate the dynamic policy process (Eisenhardt, 1989; Connelly, 1990). It is our hope that use of the BCB will lead to its further development as a practical and theoretical tool to explore the barriers and facilitators for developing integrated public health policies.

### Conclusion

This paper has tried to answer some key questions within the context of integrated local public health policies and has introduced a comprehensive framework that can map the various aspects relevant to the development and implementation of such policies. The framework was developed by translating and extending the key assumptions of the 'Behavior Change Wheel' (BCW) (Michie et al., 2011) within a framework called the 'Behavior Change Ball' (BCB). Since the BCW and BCB are designed to be applied in different contexts and for different purposes, we propose that both frameworks should co-exist. Throughout our article, we used childhood obesity prevention as an example, since this is a typical wicked problem that requires integrated preventive public health policies. We encourage researchers who are trying to support local policymakers to apply the framework and report their experiences.

# *Chapter 4*

## *Towards health in all policies for childhood obesity prevention*

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## Abstract

**Background:** The childhood obesity epidemic can be best tackled by means of an integrated approach, which is enabled by integrated public health policies, or Health in All Policies. Integrated policies are developed through intersectoral collaboration between local government policymakers from health and non-health sectors. Such intersectoral collaboration has been proved to be difficult. In this study, we investigated which resources influence intersectoral collaboration.

**Methods:** The behavior change wheel framework was used to categorize motivation-, capability-, and opportunity-related resources for intersectoral collaboration. In-depth interviews were held with eight officials representing 10 non-health policy sectors within a local government.

**Findings:** Results showed that health and non-health policy sectors did not share policy goals, which decreased motivation for intersectoral collaboration. Awareness of the linkage between health and non-health policy sectors was limited, and management was not involved in creating such awareness, which reduced the capability for intersectoral collaboration. Insufficient organizational resources and structures reduced opportunities for intersectoral collaboration.

**Conclusion:** To stimulate intersectoral collaboration to prevent childhood obesity, we recommend that public health professionals should reframe health goals in the terminology of non-health policy sectors, that municipal department managers should increase awareness of public health in non-health policy sectors, and that flatter organizational structures should be established.

## Background

Childhood obesity is currently considered an epidemic. Prevalence rates have doubled over the last three decades. Globally, approximately 170 million children (<18 years) are estimated to be overweight or obese (Lobstein et al., 2004; Onis et al., 2010; World Health Organization, 2014a,b,c). In 2010, 43 million of them were under the age of five (Onis et al., 2010). This rapid development has focused much attention on the problem (e.g., Schepper, 2011; Swinburn et al., 2011; Roberto et al., 2015), especially since childhood obesity is associated with many health problems (Han et al., 2010); it often tracks into adulthood (Herman et al., 2009) and causes huge rises in health care costs (Mayer-Foulkes, 2011).

The childhood obesity epidemic shows predictable patterns in almost all countries, due to similar systemic drivers (policies and economic systems) and environmental drivers (marketing of energy-dense foods and facilitation of passive transport) promoting overconsumption and physical inactivity (Swinburn et al., 2011). Interaction between individual factors (e.g., genetic predispositions) and the environments in which children grow up (e.g., their neighborhoods) lead to behaviors that cause a positive energy balance and in the long run weight gain (Swinburn et al., 1999; Kremers et al., 2006). In view of these drivers and the related economic and public health consequences of obesity, many experts have stressed the need for governments to take action (e.g., Gortmaker et al., 2011).

Since it is recognized that health, and specifically obesity, is influenced by determinants not only within the health domain, but also outside this domain, experts recommend the implementation of an 'integrated approach' for this so-called 'wicked problem' (Rittel and Webber, 1973; Storm et al., 2007; Kickbusch, 2009; Kickbusch and Gleicher, 2012; Roberto et al., 2015). An integrated approach is characterized by a mixture of coordinated interventions and policies by multiple disciplines, organizations, and sectors. Integrated public health policies, often referred to as 'Health in All Policies' (HiAPs), are an important part of any integrated approach since they enable its implementation (Storm et al., 2007; Hendriks et al., 2014). The HiAP approach is defined as: *'a horizontal, complementary policy-related strategy with a high potential for contributing to population health'* (Ståhl et al., 2006, p. 4). The terms 'horizontal' and 'complementary' refer to the distinguishing feature of 'integrated' compared to 'regular' (sectoral) health policies, namely, intersectoral collaboration. Ensuring that health is taken into account in policies that are developed in other policy sectors (Ståhl et al., 2006) requires close collaboration with these other sectors within government; thus, intersectoral collaboration is a *prerequisite* for the development of integrated public health policies (Hendriks et al., 2014). An example of such an integrated policy developed through intersectoral collaboration is the policy to encourage active transport by improving road safety (collaboration between the public health and transport sectors).

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The implementation of such policies has been proved to be difficult; barriers are inherent to the *intersectoral* as opposed to *intrasectoral* character of the collaboration and thus hamper the development of integrated public health policies (Jansen, 2007; Public Health Agency of Canada, 2007; Woulfe et al., 2010; Steenbakkers et al., 2012). Moreover, research shows that intersectoral collaboration within local governments is rarely established, and attempts to explore which factors cause this lack of collaboration have been scarce (Harting et al., 2011; Tubbing et al., 2012). Some studies suggest that factors related to the topic of ‘childhood obesity prevention’ (content-related factors) are responsible for the lack of intersectoral collaboration, while other studies suggest factors related to the process of intersectoral collaboration (process-related factors). Table 4.1 lists examples of these factors, based on an exploration of the literature. The literature review did not aim to be exhaustive but to provide a panoramic view of possible barriers and facilitators.

Table 4.1 Barriers and facilitators regarding intersectoral collaboration

Barriers regarding intersectoral collaboration	Reference
<b>Content-related barriers</b>	
Lack of awareness of the childhood obesity problem in non-health sectors.	Aarts et al. (2011a)
Limited engagement from other sectors in proposing and developing cross-sectoral policies.	Thow et al. (2010a)
Lack of political support for creating activity-friendly neighborhoods.	Aarts et al. (2011a)
Neoliberal political climate and individualistic societal climate.	Schwartz and Brownell (2007) Nestle (2006)
Ambiguous political climate: governments do not seem eager to implement restrictive or legislative policy measures since this would mean they have to confront powerful lobbies by private companies.	Peeler et al. (2010)
Relevance to government fiscal priorities was important in gaining support for soft drink taxes.	Verduin et al. (2005) Thow et al. (2010b)
Lack of agenda-setting: lack of relevance and competing priorities	Allender et al. (2009b, 2011)
Promoting healthy eating environments not considered a priority for local government above food safety.	Caraher and Coveney (2004)
Other legislated planning guidance may take priority for planning and transport professionals.	Bovill (2009)
A focus only on health concerns: not taking into account policy issues of other sectors.	Thow et al. (2010)
‘Wicked’ nature of obesity making it very unattractive to invest in its prevention.	Head (2008)
The complexity of the legislative framework.	Allender et al. (2009a)
Low probability of decreasing the incidence of childhood obesity within the short timeframe that most politicians work in (which is determined by election frequencies).	Aarts et al. (2011a) Head (2008)
Difficulty of developing consensus about ways to tackle the problem due to the lack of hard scientific evidence about effective solutions.	Aarts et al. (2011a) Head (2008) Nishant et al. (2012)

Framing of obesity as an individual health problem.	Dorfman and Wallack (2007) Klein and Dietz (2010) Phillips et al. (2011) Merry (2012)
<b>Process-related barriers</b>	
Local government officials lacking the knowledge and skills to collaborate with actors outside their own department.	Steenbakkers et al. (2012)
Insufficient resources (time, budget).	Steenbakkers et al. (2012) Woulfe et al. (2010) Aarts et al. (2011a)
A lack of a clear enforcement mechanism.	Thow et al. (2010a)
Perceived or real lack of power to make change.	Allender et al. (2009a)
Government priorities change.	Thow et al. (2010b)
Lack of membership diversity in the collaborative partnerships.	Woulfe et al. (2010)
Lack of clarity about the notion of intersectoral collaboration.	Harting et al. (2011)
Top-down bureaucracy and hierarchy, disciplinarity and territoriality, sectoral budgets, and different priorities and procedures in each sector.	Bovill (2009)
Insufficient organizational structures.	Steenbakkers et al. (2012) Woulfe et al. (2010) Alter and Hage (1993) Hunter (2009) Warner and Gould (2009)
Poor quality of interpersonal or interorganizational relationships.	Woulfe et al. (2010) Isett and Provan (2005)
Lack of involvement by managers in collaborative efforts.	Steenbakkers et al. (2011)
Lack of communication and insufficient joint planning.	Axelsson and Axelsson (2006)
Lack of common vision and leadership.	Woulfe et al. (2010) Hunter (2009)

A limitation of these studies is that most of them were conducted in the context of organizations (e.g., focusing on interorganizational relationships) or community coalitions, and few specifically focused on the development of integrated public health policies to prevent childhood obesity *within* local governments. Therefore, this study focused on the resources (i.e., facilitators and barriers) regarding intersectoral collaboration for public health in general, and for childhood obesity prevention specifically.



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To capture the resources needed for intersectoral collaboration and the development of integrated public health policies, we have used the ‘Behavior Change Wheel’ framework developed by Michie et al. (2011) (figure 4.1). We adopted this framework since it provides a clear structure for reflecting upon resources for intersectoral collaboration and thus could help us answer our research question.

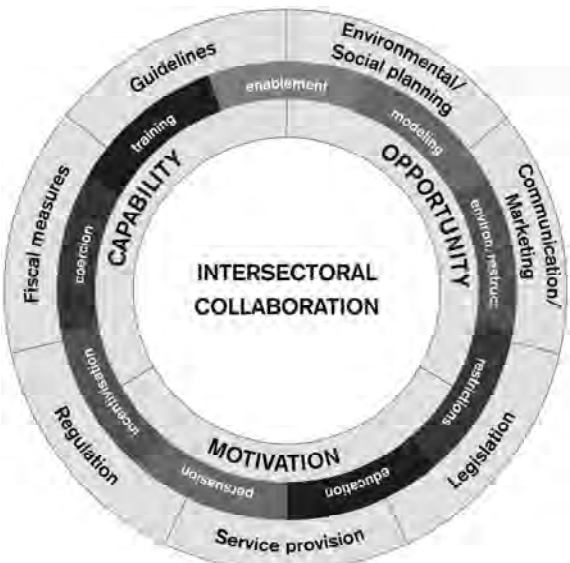


Figure 4.1 The Behavior Change Wheel, adapted from Michie et al. (2011)

The framework is based on the idea that behavior is determined by the following three resources: motivation, capability, and opportunity (figure 4.2). If one of these resources is lacking or insufficiently present, behavior change interventions, which can be implemented by certain policies or programs (the outermost circle), might be needed to increase the likelihood of achieving intersectoral collaboration (Michie et al., 2011). The present study focuses on the resources for intersectoral collaboration, as described below.

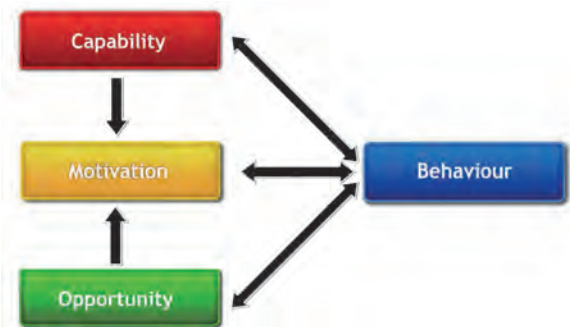


Figure 4.2 The COM-B model

‘Motivation’ can be divided into reflective and automatic processes. Reflective motivation involves more conscious decision-making in evaluations and plans (Michie et al., 2011). An example is having positive beliefs about the outcomes of intersectoral collaboration. Automatic motivation is based on emotions and impulses that arise from associative learning or innate dispositions. An example of automatic motivation is experiencing work engagement (Schaufeli, 2012).

‘Capability’ is the extent to which individuals can adapt to change, generate new knowledge, and continue to improve their performance (Fraser and Greenhalgh, 2001): *‘capability is what people are able to do and to be’* (Sen, 1985). Psychological capability refers to the capability to engage in the necessary thought processes such as comprehension and reasoning (Michie et al., 2011), and it is closely related to competence, which refers to what individuals know or are able to do (Fraser and Greenhalgh, 2001). An example of psychological capability is having boundary-spanning skills (Yip et al., 2008).

‘Opportunity’ refers to conditions that are external to the individual actor. Two forms of opportunity are distinguished: physical and social. ‘Physical opportunity’ is afforded by the working environment (e.g., organizational structures), while ‘social opportunity’ refers to the municipal situation that dictates the way people think about things, the words and concepts they use, and the predominant discourse (e.g., organizational culture) (Michie et al., 2011).

The current dearth of knowledge regarding factors that facilitate or hamper intersectoral collaboration within local governments might explain why integrated public health policies have not been frequently developed in practice. Therefore, we aimed to answer the following research question: *‘What resources do local non-health policymakers need in order to collaborate with the health sector in the prevention of childhood obesity?’*

## Methods

### Study sample and design

In this study, we used a single-case study design (Yin, 1993) and in-depth semi-structured interviews to collect our data. Our study sample consisted of eight policy officials working in a Dutch municipal government, responsible for 10 different policy sectors (some officials being responsible for more than one sector) (table 4.2). At the time of the interviews (summer 2011), this municipal government employed 65 people. The municipality has around 11,000 inhabitants and covers an area of about 16 km<sup>2</sup>.

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Table 4.2 Interview sample, F = female, M = male

Interviewed Policy Sectors	Participants (n) – Total (8), Female( 3) Male (5)
Youth	(official 1 (F))
Social affairs	(official 1 (F))
Tourism	(official 1 (F))
Municipal environment	(officials 2 (M) and 3 (M))
Mobility	(official 4 (M))
Public order and security	( official 5 (F))
Sports	(official 6 (M))
Culture	(official 6 (M))
Education	(official 6 (M))
Spatial planning	(officials 7 (F) and 8 (M))

Two interviewers jointly conducted all interviews: one (male) public health official working at the municipal government in which this study took place and one (female) university researcher. Afterwards, the two interviewers reflected on each of the interviews to compare notes and arrive at a more accurate interpretation of the data. Their reflections were entered into the reports that were sent afterwards to each of the interviewees and were also used in the data analysis. The interview reports were sent to the interviewees by way of member checks, in order to increase the reliability of our data.

The interview protocol (appendix 4.1) was jointly defined by the two interviewers. Throughout the interview, we used childhood obesity prevention as an example of a public health problem that could be addressed more effectively if health and non-health sectors would collaborate. Our approach aim was to first focus on intersectoral collaboration for public health in general and then to focus on the prevention of childhood obesity. We assumed that this approach would reveal more information about resources for intersectoral collaboration than narrowing down our focus too early. Furthermore, we assumed that resources for intersectoral collaboration would be comparable, as long as the policy issues that were being discussed had a ‘wicked’ character (Rittel and Webber, 1973; Head, 2008).

### Data analysis

The university researcher transcribed the relevant parts of the interviews, categorizing them under subheadings that were based on our predefined interview items. She then sent the resulting reports to the public health official (the second interviewer), who sent them to the interviewees for a final accuracy check. Thus, the public health official was not only one of the interviewers, but he also assisted the researcher in conducting member checks. The interviewees were asked to send any comments to both interviewers. When the interviewees made any comments, the researcher checked and adjusted the transcripts and sent them once more to the public health official (the second interviewer). This approach ensured the accuracy of the transcripts. The transcripts were analyzed with the help of NVivo software, using the Behavior Change Wheel as the theoretical framework to code the responses (Michie et al., 2011).

## Findings

Based on our analysis, we describe here the facilitators and barriers regarding intersectoral collaboration that we identified. Each facilitator or barrier is categorized under the factors of motivation, capability, or opportunity. For each quotation, we state whether the interviewee was male (M) or female (F) and the department for which they worked.

### Motivation

The main perceived barrier to intersectoral collaboration that was mentioned during the interviews was that the health and non-health sectors did not have the same *policy goals*. This could reduce the motivation among non-health policymakers to involve the public health sector in an early stage of policy development and take aspects relevant to public health into account. Health was perceived as a *side issue*, as was expressed by a spatial planning official:

*‘Those are all side issues, as you start with a different goal in mind. Somebody comes along and says... I want to build a house, and it’s only then that you start thinking, and then it’s a matter of getting a house built there... You can come up with other things as you go along... But our goal is not public health.’* (Spatial planning official)

Nevertheless, policy goals were frequently similar, even if officials were not aware of this. For example, in the case of creating activity-friendly environments, similarities of policy goals were discovered *during* the interview; the transport department official commented how one of his policy goals, creating safe roads to walk and cycle on, had a positive effect on the residents’ level of physical activity and thus affected public health:

*‘The idea of ‘sustainably safe’ actually means that you try to design neighborhoods with that concept in mind, in other words, a 30 kilometers an hour speed limit.’* (Transport department official)

As there were such similarities between policy goals, this facilitated intersectoral collaboration. However, most interviewees seemed surprised, as they were *not aware* of the similarities, since they had never *explicitly* incorporated health in their policies. For example, the official responsible for youth services realized that she had not been paying attention to public health themes in her work routines, which she could easily have done:

*‘In children’s and youth services you could... select themes that relate to health and overweight prevention.’* (Official for youth services, social services and tourism)

Not only the health sector, but also other policy sectors with less *dominant* policy frames, such as that of municipal environment and tourism indicated that they tended to be ‘forgotten’ when a new policy was being developed. For example, when a new residential area is being designed, the municipal environmental department was not involved until the project was nearly complete:

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*'Initiatives for construction work are first presented to the spatial planning department... and they look mostly at the planning aspects... So certain things tend to be overlooked at first.'* (Municipal environment official)

Another barrier to collaboration with the health sector was the difficulty of making health goals *visible* and *measurable*. This appeared to cause *stereotyping* of the health sectors as being 'soft' and 'more interested in talking than doing', while non-health sectors (especially the more technically and construction-oriented departments) achieved 'real' (visible and measurable) results. The stereotyped perceptions of the representatives of the various sectors were seen as an obstacle to intersectoral collaboration. In line with this, interviewees emphasized that health and non-health sectors have different 'world perspectives.' According to the interviewees from the 'welfare-oriented' sectors (i.e., policy sectors with the primary goal of increasing the subjective well-being of the citizens), the 'technically oriented' sectors (i.e., policy sectors with the primary goal of improving the physical environment of the citizens) think health is important in life, but only *after* economic targets have been met:

*'They look at certain things in a different way, they're people who have a very different background, different training. It's the sector of hard facts. They're concerned with money, bricks and mortar, they just have a different perspective.'* (Public health official and second interviewer)

*'They might exaggerate and say 'You just talk about all kinds of stuff'; and we would say 'You never think about people'.'* (Official for youth services, social services and tourism)

It was striking that the technically oriented sectors themselves were quite positive about taking health into account. They just *framed* their policy goals differently; instead of emphasizing health outcomes, they used terms like 'aging in place' (levensloopbestendig), 'sustainably safe' (duurzaam veilig), 'balanced' (in evenwicht houden), or 'livability' (leefbaarheid) to express their views on preferred outcomes. One interviewee referred to developments in a new residential area and their potential positive effects on public health:

*'You can achieve that... What you do take into account is whether it enables people to 'age in place'.'* (Spatial planning official)

Most interviewees mentioned the *territorial attitude* of some policymakers; they defend their own work domain and do not allow others to get involved in their professional work, on principle. The extent of this territorial attitude also depends on people's individual character; the main personal factors that were mentioned were whether people *trust* their colleagues (i.e., feel it is safe to approach other policy actors) and whether they have an *open personality* (being positive about change, being receptive to new experiences):

*'It's often a matter of character... people with a background in technology take a different view on people... they have very different characters.'* (Official for youth services, social services, and tourism)

### **Capability**

One of the barriers within the 'capability' category was the lack of knowledge about the *nature* of public health:

*'There's not a great deal of knowledge about health among the local authorities... It's certainly not a bad idea to involve the regional Public Health Service.'* (Municipal environment official)

Understanding *how* health should be taken into account and the importance of taking it into account was a 'new' way of thinking for many non-health policy sectors. During the interview, one official from the spatial planning department admitted that she had always reduced public health to the presence or absence of illness rather than aspects like healthy lifestyle:

*'We simply do not think about that. To me, public health is simply something like whether people get ill or not, and you do not build houses with that in mind.'* (Spatial planning official)

To many municipal officials, and especially those with a non-health professional background, public health is a very 'abstract' concept, which is not very visible to them. Non-health policy actors therefore frequently proposed to make the concept of public health more *concrete*. This could also improve the ability of non-health sectors to relate the outcomes of their own work to public health outcomes or to use public health as a vehicle to achieve their own policy goals (or the other way round).

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When talking about the influence of spatial planning on public health, both of the spatial planning officials we interviewed referred to their lack of awareness of ways they could improve public health. For example, both referred to their own policy themes, such as developing attractive green spaces and water features to improve the esthetics of the landscape, but they did not know this could also improve public health by encouraging people to go walking or cycling more often:

*'Whether we do this consciously, I do not think so.'* (Spatial planning official)

*'There are many things that you take care of, but without saying so. You incorporate those themes (i.e., themes that can affect public health) in your town planning designs...'* (Spatial planning official)

In this context, the leading role of the heads of departments was also mentioned by one of the interviewees; they should check whether policy proposals are integrated

*'That would be my advice, that they should at least ensure that.'* (Official for youth services, social services, and tourism)

### **Opportunity**

Facilitators in the opportunity category included the availability of sufficient resources (e.g., time, money, and policy free space) to adjust policy plans to ensure public health outcomes, and the recognition that citizens require facilities that promote health (recognizing that it is in the interest of citizens that municipal authorities pay attention to public health). When talking about the actors involved in policymaking, one interviewee commented that policies used to be largely developed behind closed doors (by policymakers), but that the role of the public in policymaking has now expanded:

*'We listen to people's wishes. If signals come from the public, we try to respond to them... Citizens have a large say in their residential environment. You see the same in other municipalities.'* (Spatial planning official)

In this context, interviewees also mentioned the benefits of working within a *small* municipality as follows: (1) officials from different policy sectors know each other and often work within a short physical distance from one another and thus have close social ties and physical proximity and (2) smaller municipalities were said to be more sensitive to the needs (including public health needs) of their citizens. One interviewee referred to the occasional lack of opportunity to take these needs into account (e.g., in developing footpaths and safe crossings):

*'If it does not work out that's usually due to money problems.'* (Spatial planning official)

Organizational structures were said to hamper intersectoral collaboration since they are organized along sectoral lines. In practice, this meant that several sectors



did not share a manager who would be responsible for more than one sector, and who could focus on the elements shared by the sectors. One official referred to the facilitative role of the change that had taken place in the organizational structure of their municipal government (which became flatter as a result of departments being merged) and the effect this had had on the distance and collaboration between policymakers from different sectors:

*'It's only recently, since we're housed together, that we hear each other's views. Until recently, we might write a policy plan here, while the people at spatial planning established a different policy plan that wasn't compatible at all. We're now trying to prevent that in the new department, but I do not even want to think about the way these things go in larger municipalities.'* (Official for youth services, social services, and tourism)

This official indicated that the bureaucracy in larger municipalities is widening the gaps between policymakers and thus raising the barriers to intersectoral collaboration. When talking about the role of organizational structures, interviewees also mentioned the difference in agenda-setting in the various policy domains. Organizational structure could lead to convergence or divergence of interests. One official referred to the lack of interest among the technically oriented sectors in maintaining a welfare institution. This hampered the achievement of welfare-oriented policy goals, since the technically oriented sectors were not interested in supporting such an institution:

*'For instance when it's about the use of buildings, we from a welfare point of view think it's important that such a (welfare) institution continues to exist, but (the technically oriented departments) have other interests.'* (Official for youth services, social services, and tourism)

This also relates to the next barrier: budgets as well as responsibilities (and goals) tend to be allocated along *sectoral* lines and are also related to the relevant 'cultural' differences between the various policy sectors:

*'You also notice differences of opinion, especially differences in departmental cultures. For instance I'm also responsible for tourism, and from a tourist perspective I would have preferred a different option (referring to designing attractive sites for tourists), but we weren't involved at that stage. Well and by the time we were informed about it, everything had already been settled.'* (Official for youth services, social services, and tourism)

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Thus, each policy sector uses a different strategy to achieve their diverging goals. This divergence in policy goals makes it difficult to align strategies:

*'When you look at the current plans, you cannot say we're specifically considering public health... We're not really trying to see whether we can actively, involving the built environment, playground equipment for kids and so on.'* (Spatial planning official)

*'It's just not that easy'* (Spatial planning official)

There are few opportunities to align policy strategies since less dominant policy departments are systematically being involved in the policy development cycle at too late stage. One interviewee said that construction plans were usually first implemented, and her sector was then asked to repair the damage:

*'I get the feeling that if social services had been involved in this at the first planning stage...'* (Public health official) *'It would have been a completely different plan.'* (Official for youth services, social services, and tourism) *'And would that be intentionally or unintentionally?'* (University researcher) (both policy officials appear very uncomfortable because it is a sensitive topic)

Further barriers that decrease the opportunities to adjust policy plans to public health goals were said to be *national* standards or legislation, which might hamper the perceived ability to take health aspects into account, since they were sometimes either too strict or too loose. If those national guidelines were not strict, tightening them would improve public health outcomes; this was often difficult since it would affect economic performance or be impossible due to the budget cuts:

*'There are a number of guidelines, and we try to stick to them... as long as the budget allows it... I find that this year we cannot include any measures for the 'sustainably safe' campaign (a concept in which neighborhoods are designed in such a way that they create environments promoting safe active transport) in the operational budget.'* (Transport department official)

When non-health policy sectors are not sure of the influence their policy has on health, and they want to be advised on this, they have to pay to obtain such information from the regional Public Health Service:

*'but if it (the question regarding public health advice) is not specific, we have to pay for it.'* (Municipal environment official)

In addition to this, there are the budget cuts that municipal governments have had to introduce due to the economic crisis. Maintaining sports facilities requires large sums of money, which are currently difficult to make available.

Also, the current neoliberal political climate aims to decrease government involvement in policies on community organizations (fewer regulations):

*'At the moment, we're mostly trying to create the right conditions for sports facilities... We're not going to tell the clubs what to do (e.g., regulating the availability of healthy snacks in their canteens).'* (Official for education, child care, sports, and cultural affairs)

Although governments are less involved in using subsidies to control local organizations, a potential for imposing some controlling requirements was mentioned:

*'We have a number of subsidy schemes (to improve public health) but we do not prescribe what they have to do, their policies... But you could think about that, you could come to agreements with them, like for instance we want you to pay attention to such and such once a year (referring to various health topics).'* (Official for youth services, social services, and tourism)

Conservative local organizations (which are unwilling to pay attention to health aspects) can also hamper the implementation of an integrated approach:

*'These clubs, they do not feel the need to organize after-school activities. They still have enough members. Like the idea of taking over gym classes; they do not feel the need.'* (Official for education, child care, sports, and culture)

The rigidity of organizations was also mentioned as a factor impeding collaboration. For example, even if management is in favor of collaboration, when those at the operational level do not want to change, it will take a long time before a school or sports clubs actually implement, for example, food policies that take health into account. Therefore, a lot of perseverance was said to be needed on the part of the health sector to get integrated public health policies implemented. Additionally, the commercial nature of most community organizations could reduce the opportunities to implement certain health policies because they might put them at a competitive disadvantage:

*'The first thing people throw away is the greens (e.g., a piece of lettuce and a slice of tomato). You just find it thrown away somewhere. So then you could say you should not sell fatty snacks, but then they're a commercial enterprise, they have to make a living.'* (Official for education, child care, sports, and culture)

### Discussion

This study examined the resources that policy actors from non-health-related government sectors needed in order to collaborate with the health sector in developing integrated public health policies. Our interviews showed that six factors, divided over the three resources of motivation, capability, and opportunity, represented the most salient barriers to intersectoral collaboration. These resources are relevant for the development of integrated public health policies to prevent childhood obesity, but they are thought to be similar for ‘wicked’ public health problems in general. The factors included specific discipline-related policy goals and territoriality (motivation), a disability to relate one’s own work to public health and the failure of management to facilitate this (capability), and a lack of resources and inappropriate organizational structures (opportunity). Below, we present some recommendations for each of these resources, which may help to achieve a transformation of the current fragmented situation into one of integration.

#### **Motivation to collaborate: bridging gaps may not be as difficult as it seems**

Firstly, there was little motivation among the non-health departments to collaborate with the health sector, since the non-health departments claimed to have *different policy goals* than public health. Their goals were related to their own policy discipline and thus hard to change. Each policy domain works on the basis of its own logic and without regard for the impact on other areas of society. Such ‘disciplinarity’ was also found to hamper intersectoral collaboration in the study by Bovill (2009). The non-health sectors do not receive any incentives to collaborate with the health sectors, since they are judged (by management and municipal executives) on the basis of a set of criteria that are specific to their department. Nevertheless, when we asked interviewees about the content of these ‘diverging’ policy goals, we found that the goals of most non-health sectors were sometimes clearly related to public health goals, sometimes even to such an extent that they might easily be replaced by public health goals. For example, the Department of Transport said they were highly motivated to make their municipality very safe for cyclists, and that ‘promoting sustainable environments’ was the essence of their work. A ‘sustainable environment,’ however, is almost identical to the public health goal of promoting a ‘leptogenic’ environment (Swinburn, 1999), since both terms describe an environment in which citizens feel safe and encouraged to use active means of transport (i.e., cycling, walking). However, this link was *overseen* by both sectors, and bridging the gap between these disciplines, thus, seemed difficult, while in fact the bridge was already present (it only needed to be detected). This barrier to collaboration might be overcome if public health professionals could *reframe* a health topic in such a way that it matches the terminology of the other policy sectors. Reframing health issues in terms understood by the non-health policy sectors can help remove the need to compete with those more dominant policy frames. Such reframing is especially urgent for childhood obesity, as this is still described as a matter of individual responsibility, so that only a set of limited and mostly ineffective policy strategies

to prevent childhood obesity come into view. Therefore, public health professionals need to put effort into understanding the goals and vocabulary of other relevant disciplines, in order to be able to reframe the debate on childhood obesity in such a way that other policy domains will also realize the risk that childhood obesity poses for the achievement of their own policy goals (e.g., reduced economic performance due to obesity-related work absenteeism). As Stone (1997) stated: *'Nothing is a risk until it is judged to be a risk'*.

Secondly, the more welfare-oriented policymakers reported that *territoriality* was hampering intersectoral collaboration. This finding is also in line with the research findings reported by Bovill (2009). Territoriality was related to the different 'world perspectives' in their different policy domains (i.e., their territories). It was remarkable that only those interviewees who were working in policy fields perceived to be more closely related to the public health sector (e.g., youth services and sports) reported that the outlook of the more technically oriented policy sectors (e.g., spatial planning and transport) was fundamentally different from their own. According to them, the lack of visible results of health policies was a key distinctive feature explaining why the policy field could be divided into two 'subcultures.' Technical sectors focus on bricks and mortar (i.e., changing the physical environment), while welfare sectors focus on people (i.e., the subjective well-being of citizens). Measuring subjective well-being is clearly much harder than measuring physical changes. In the view of welfare-oriented policymakers, the technically oriented policymakers are stereotyping them as 'talkers' rather than 'doers.' This attitude was, however, not explicitly confirmed by the statements of the more technically oriented policymakers themselves and thus might represent an unintentional preconception on the part of the welfare sector. A way to overcome this territoriality problem is to make health outcomes more *visible*; increased understanding of each other's work may reduce the stereotyping currently experienced by welfare-oriented policymakers. Additionally, *frequent communication* can be expected to familiarize policy sectors with one another and increase trust 'familiarity breeds trust', which was also mentioned to be an important facilitating factor for collaboration (McGuire, 2006).

### **Capability to collaborate: the blind leading the blind**

Since policymakers were not used to collaborating with policy sectors outside their own 'niche,' their experience of intersectoral collaboration was limited (see also Jansen, 2007; Steenbakkens et al., 2011, 2012). Most interviewees argued that it was 'new' for them to think explicitly about public health outcomes in relation to their own work. Although they unconsciously paid attention to public health aspects, such decisions were not consciously made and thus *not communicated* explicitly to the health sectors. This finding is in line with those by Aarts et al. (2011a), who found that most policy sectors were in fact paying attention to public health, without being aware of it.

In line with the suggestions made by R Axelsson and SB Axelsson (2006), this barrier can be overcome by increased communication and stimulating joint planning. We recommend more explicit communication about the current

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(sometimes health-promoting) decisions of non-health sectors to increase awareness about the links between the health and non-health sectors. Regional Public Health Services can assist by highlighting the similarities between the work of both sectors. To this end, Public Health Services also need to expand their skills. In addition, sufficient joint planning would enable alignment of policy strategies. Mismatches, which were sometimes so pervasive that certain policy documents (in which much time and effort had been invested) had to be rejected completely, can be prevented through early alignment. One tool that can be used to explore more specific strategies to achieve such alignment is contribution mapping (Kok and Schuit, 2012).

In this context, a fourth barrier was also identified: the failure of the heads of departments to stimulate intersectoral collaboration. Within hierarchical organizations, heads of departments manage the work processes that can lead to intersectoral collaboration, so their potential influence is large (at least in theory). One explanation for the lack of involvement of management might be that, as was found by Steenbakkers et al. (2011), managers lack sufficient know-how for intersectoral collaboration. Managers could adopt an ambiguous attitude towards the pursuit of integration because they are aware of the demands this would impose on them. Moreover, their inexperience in this 'new' job requirement might make them feel insecure about their own ability to do the job and thus create stress. Another cause of stress might be related to their fear of losing status: within hierarchical organizations, integration requires system-wide changes. Merging several departments requires changing organizational subcultures into one new organizational culture, and these cultural changes should be complemented by changes in the organizational structure to be sustainable. By making managers responsible for more than one sector, they might become more focused on the elements shared by the various sectors. However, this requires changes that can put the status of actors higher up in the hierarchy into question. The expectation of losing status might reduce the motivation among management and municipal executives more than among operational level actors (the higher in the hierarchy the more power they stand to lose). To keep the system as it is, higher level actors might therefore intentionally inhibit real changes (i.e., changes that might be truly effective for intersectoral collaboration). Previous studies (Milio, 2001) have identified that, within local governments, process management is insufficiently implemented and a more central role of 'liaison' manager is warranted (Unger et al., 2000). Intersectoral collaboration will be facilitated if top management supports intersectoral collaboration and heads of departments act as 'champions' of such collaboration (Bovill, 2009).

**Opportunity to collaborate: there is no such thing as a free lunch**

The fifth barrier that our study identified was that policymakers had insufficient resources to adjust their policy plans to public health; non-health sectors argued that paying attention to health requires time and money. Due to the budget cuts faced by most municipalities in the Netherlands, both resources are currently in short supply. Additionally, some policymakers argued that they would not approach the regional Public Health Services for advice, as they would have to pay for it. This barrier might be overcome if the health policy sectors or the regional Public Health Service were involved in the development of policy plans at an earlier stage, which would help prevent damage having to be repaired afterwards. Health professionals should invest efforts in making these preventable and long-term costs more proactively visible at an earlier stage of the policy cycle (e.g., by conducting health impact assessments). If the regional Public Health Services could decide to offer their policy advice free of charge, the municipal departments might become more proactive in asking for advice, and the non-health sectors might more clearly understand the aims and added value of the intersectoral approach, which was found to be an important facilitator for intersectoral collaboration (Bovill, 2009).

The sixth barrier we found was that organizational structures hampered intersectoral collaboration. Switching from a hierarchical to a 'flatter' organizational structure may result in policy sectors no longer working in a fragmented system, but being forced to work within intersectoral teams. A 'divisionalized adhocracy' is expected to be more suitable for intersectoral collaboration, since complex and highly interdependent work fits in better with an organizational structure in which teamwork and liaison managers coordinate work processes, which is thus a *prerequisite* for the development of integrated public health policies (Unger et al., 2000). As Hunter (2009, p. 202) argues, the central feature of all attempts to develop partnerships involving whole systems, rather than individual 'silos,' is that they are superimposed on '*a fragmented and largely tribalistic set of arrangements characterized by different cultures and ways of conducting the business.*' Thus, significantly better public health outcomes can be achieved by removing barriers such as sectoral budgets and different priorities and procedures in each sector (Bovill, 2009), which can prevent the absorption of significant resources (time, money) that is currently caused by these fundamental errors of organizational structures that have endured for decades (Hunter, 2009).

**Strengths and limitations**

As with all single-case studies, the results of our study are difficult to generalize, as it involved one municipality and a limited number of governmental actors. In addition, the size of the municipality, which was very small, could also have an effect on the generalizability of our findings. However, most municipalities in the Netherlands are actually small or medium sized (<100,000 inhabitants) (Giesbers, 2006). Possible aspects that might be related to the size of the municipality are the strength of social ties and physical proximity (knowing each other professionally and personally, working in the same office), responsibility for more than one policy sector (in smaller municipalities, public health officials are often responsible for



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one or two other policy sectors as well), the type and magnitude of problems that are encountered (typical urban problems versus local issues), the amount of resources available for public health (lack of resources may function as an incentive for collaboration, while lack of time acts as a discouragement), and the organizational structures (more or less bureaucratic). Another limitation might be the lack of triangulation (e.g., document analysis). A strong point of this study was that we achieved data saturation, and that representatives from all policy disciplines were involved. Another strong point of this study might be that the public health official and the university researcher reflected on each of the interviews together. This enabled the researcher to obtain a more accurate interpretation of the data than would otherwise (without the involvement of someone with background knowledge about the interviewees) be possible. The member checks we conducted (a report of each interview was sent to the interviewee) presumably also increased the reliability of our data (Yanow and Schwartz-Shea, 2006).

## Conclusion

Our single-case-study has identified potentially important facilitators and barriers regarding intersectoral collaboration to promote public health in general. The resources we identified are also applicable to the development of specific integrated public health policies to prevent childhood obesity. This means that public health officials can use this information to anticipate barriers that might hamper intersectoral collaboration for childhood obesity prevention. The most promising facilitating factors we identified were related to motivation, while the least prominent barriers were related to capability, and the most pervasive barriers were related to opportunity. This means that although non-health sectors might be motivated to collaborate with the health sectors, more attention should be paid to the capabilities required, and to create opportunities for collaboration.

The influence of local government actors and their policies have so far largely been neglected in public health research. Hence, a large potential for developing health promoting policies and interventions by local government organizations still remains to be discovered. Investing in intersectoral collaboration might increase the effectiveness and sustainability of current health promotion efforts to prevent childhood obesity.

**Appendix 4.1 Topic list for the interview protocol**

1. Clarifying the role and influence of the policy sectors: their general policies and more specific policies, policy goals.
2. Identifying interfaces between a particular policy sector and the public health sectors.
3. Exploring to what degree a particular policy actor is aware of health aspects within their sector and of the extent to which they are used to collaborating with the regional Public Health Service or the public health department within their own organization.
4. Investigating what the particular policy sector thinks about intersectoral collaboration with the health sector.
5. Exploring opportunities for more collaboration between health and non-health policy sectors.
6. Detecting barriers to attention for public health aspects in non-health policy sectors.



# Chapter 5

## *Local government officials' views on intersectoral collaboration within their organization*

A qualitative exploration

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## Abstract

**Background:** Intersectoral collaboration (ISC) is defined as collaboration between health and non-health local government officials and is a prerequisite for the development of integrated policies that address wicked public health problems. In practice, ISC has proven to be problematic, which might be related to differing views on ISC across various policy sectors. Therefore, our objective was to explore local officials' views on ISC.

**Methods:** We interviewed 19 officials responsible for 10 different policy sectors within two small-sized municipal governments within one Dutch region. We asked interviewees about ISC facilitators and barriers and categorized them in the theory-based concepts of capability, opportunity and motivation.

**Findings:** Capability was found to be determined by the ability to share policy goals, and was more likely to increase when officials had greater motivation to continue learning. Interviewees in both municipalities expected that flatter organizational structures and coaching of officials by managers could improve ISC opportunities. When the perceived feasibility of ISC and professional autonomy was low, motivation to learn new ISC skills was low.

**Conclusion:** In the view of government officials, ISC is an appropriate tool to address wicked public health problems, but implementing ISC requires flatter organizational structures, merging of departmental cultures and leadership by heads of departments and city managers in order to decrease officials' fears of losing professional autonomy. Public Health Service officials can play a more active role in merging cultures by increasing understanding about the multidimensionality of public health and reframing health goals in the terminology of the non-health sector.

## Background

An important prerequisite for the development of integrated public health policies is intersectoral collaboration (ISC). Within the context of governmental policy, this refers to collaboration between the 'relevant' officials from health and non-health government sectors to prevent very complex (i.e., wicked) public health problems such as childhood obesity (Australian Government, 2007; Hendriks et al., 2014). 'Relevant' refers to the goal of ISC, which is to approach the determinants of health in an 'integrated' way. Since health determinants operate in both soft domains (i.e., welfare-oriented, like health education, safety, and sustainability), and hard domains (i.e., technically, physically and financially oriented, like street lighting, speed limits in residential areas and sidewalks), health ideally should be a mandatory focus across domains and structured into the policies of non-health sectors as well. This implies the need for ISC (Kickbusch et al., 2008; Aarts et al., 2011a; Steenbakkers, 2012; Tubbing et al., 2012; Hendriks et al., 2014). In the policy literature, very complex (public health) problems which have proven to be resistant to resolution are often described by the term 'wicked'. Wicked is not referring to the evilness of a problem, but is referring to the multi-causal nature and social complexity (i.e., involving a wide range of actors) of the problem. 'Wicked' problems are contrasted to 'tame' problems, which might be technically complex, but are less socially complex. Therefore tame problems can be more tightly defined and solved by linear analytical approaches compared to wicked problems which require more innovative and collaborative (intersectoral) problem solving approaches (Rittel and Webber, 1973; Australian Government, 2007).

In Dutch municipalities, operational level public officials generally are divided over 8 to 10 different policy sectors each with their own set of policies (e.g., town planning policies, sport policies). In the public health (PH) sector, officials are assisted by Public Health Services (PHSs) which are formally an extension of the municipal PH department (Vereniging van Nederlandse Gemeenten, 2009). The work of operational level officials is guided by the policy decisions that are (ultimately) made at the strategic level by the municipal council members. The municipal executive body (called College of Mayor and Aldermen) is responsible for implementing decisions and the city manager is, as director of the bureaucratic work force, responsible for the translation of political decisions into organizational outcomes. At the tactical level, heads of department(s) manage the work process of the operational level officials. Sometimes, the public is also involved in the policy process; 'bottom-up' approaches refer to policy developments that are more community-driven, while 'top-down' approaches are based on more bureaucratically-driven policy developments (Eversole, 2011, 2012). Since community needs are rarely restricted to one policy sector; ISC again becomes relevant.

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Although quite an extensive range of the literature has explored determinants of ISC (e.g., Himmelman, 2002; Public Health Agency of Canada, 2007; World Health Organization, 2008; Thow et al., 2010a,b, 2011; Storm et al., 2010, 2011, 2012, 2014; Tubbing et al., 2012; Nilsen et al., 2013), fewer studies (e.g., Allender et al., 2009a,b, 2011; Hendriks et al., 2012, 2013a; Steenbakkers, 2012) have documented how ISC is perceived (qualitatively) by officials from different policy sectors (i.e., expertise fields) within local government. Because this type of ISC is critical for making local integrated public health policies (Hendriks et al., 2014), the present study aims to answer the following research question: *‘What are the views of public officials on the determinants of intersectoral collaboration (ISC) within local governments during the preparation phase of implementing ISC within their organization?’*

### **The COM-B system**

To understand the determinants of ISC, we apply the ‘COM-B’ system; capability, opportunity, and motivation (COM) and behavior (B). The COM-B is part of the Behavior Change Wheel (BCW) (Michie et al., 2011), which is based on a synthesis of frameworks across a range of areas (e.g., environmental and cultural change, social marketing). Since the transition from *intrasectoral* to *intersectoral* collaboration requires the adaptation of working routines and organizational behaviors, and the COM-B system recognizes that behavior change does not occur in a vacuum, but will occur only when COM determinants for ISC are sufficiently present, using the COM-B seemed an appropriate framework for this study (Michie et al., 2011; Hendriks et al., 2013a,b).

‘Capability’ refers to what individuals know or are able to do. For example, the ability of officials to assess the impact of their own work on PH, their beliefs about their capability to persuade stakeholders to invest in health policies, or the charisma of actors to direct the consensus-building process towards a direction that suits their interests (Choi et al., 2011; Michie et al., 2011; Cane et al., 2012; Hendriks et al., 2013a,b).

‘Opportunity’ encapsulates structural variables, including all aspects of the physical and social environment that influence behavior either directly or through motivation (e.g., through incentive structures, consultation structures, hierarchical or flat organizational structures). Organizational variables can be operationalized as types of opportunity and can represent a system of interacting elements in their own right. Examples are departmental cultures and accompanying traditions and worldviews in each sector that may predict changes in policies or the current limitations officials face during policy developments as a result of previous actions or decisions (i.e., path dependency). Structured relationships related to legitimacy or hierarchical power affect if operational level officials can translate their intentions in behavior or if they can be coerced to comply even if they do not want to perform a certain behavior. Also broader social forces like capitalism or globalization may indirectly shape the policy process. Further, timing, policy free space and fiscal resources are important physical opportunity factors, because decision-making moments are often structured, national devolved obligations need



to be met and budgets limit how flexible officials can be in choosing their actions (Choi et al., 2011; Michie et al., 2011; Cane et al., 2012; Hendriks et al., 2013a,b).

'Motivation' can involve automatic processes or more reflective conscious decision-making. Automatic motivation can involve work routines like wanting to involve certain colleagues because of personal connection and trust (Himmelman, 2002). Reflective motivation can involve choices that are made based on evaluations of past policies, or carefully prepared efforts to push certain policy ideas into formal policies by officials awaiting for a 'window of opportunity' (Kingdon, 2003). The components of COM-B can be construed at any level (e.g., individual, group). For example, in an organization one may wish to characterize an aggregate measure of motivation to engage in a particular organizational behavior in terms of the mean level or the proportion who report a given level of motivation (similarly, with capability) at a certain stage in the development of integrated public health policies (Choi et al., 2011; Michie et al., 2011; Cane et al., 2012; Hendriks et al., 2013a,b; Storm et al., 2014).

## Methods

### Study sample

ISC can take many forms, including public-private partnerships, public-non-governmental partnerships or public-public partnerships (e.g., between two governments) (Tubbing et al., 2012). In this study, we refer to ISC as an organizational behavior between operational level officials from different fields of expertise within the same organization (i.e., local government) and same organizational level (i.e., horizontal collaboration (Steenbakkers, 2012)) during policy development; i.e., agenda- setting, policy formulation, decision-making, implementation, evaluation and termination of the policy. An example is the collaboration between the local governmental public health (PH) official and the spatial planning official during policy formulation for an activity- friendly neighborhood (Aarts et al., 2011a).

To understand the views of local officials on ISC, we looked for municipal governments ('cases') that were interested in implementing ISC. We purposively selected two municipal governments that were in an early phase of ISC (Storm et al., 2014), both located in the same Dutch region, similar in terms of size and the number of employees, and both aiming at an organizational restructuring in which officials from 'hard' and 'soft' domains would work within one overarching department. The municipalities differed with regard to the actors who had conceived the idea to strengthen ISC. In case 1, this was the municipal council, and in case 2 this was the PH official. At the moment of the interviews, both municipalities were preparing the implementation of ISC. Because of the difference in actors who conceived ISC, we expected to get a slightly broader view on ISC determinants (Yin, 2002).

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During the data collection period (between the summer of 2011 and the spring of 2013), case 1 had 100 employees and case 2 had 65 employees (both municipalities are 'small' by Dutch standards). Both municipalities have around 14,000 inhabitants and cover areas of about 25 km<sup>2</sup>. In each case, we aimed to select one representative from each policy sector (as defined in that specific municipality) in order to obtain a broad view on potential barriers or facilitators for ISC. In both cases, we were able to select one or two representatives from each policy sector, which resulted in the selection of 10 (case 1) and 9 (case 2) officials at the operational level responsible for a total of 10 different policy sectors (some officials were responsible for more than one sector).

### **Data collection**

Our data collection and analysis focused on documenting each case (i.e., each of the two municipal governments we studied) by observing meetings of PH officials with Public Health Service (PHS) officials and by conducting semi-structured interviews using a topic list (appendix 5.1). Observations were used to assist reflection and contextualize the interviews. In both cases, data was collected during a premature stage of ISC (Storm et al., 2014).

### **Data analysis**

We used MaxQDA software (2014) to analyze the transcripts to identify themes that recurred frequently in the interviews and were expressed with much emphasis. Firstly, we coded all facilitators and barriers and after that, we categorized them in COM (Michie et al., 2011). This analysis was discussed with the involved PH and PHS officials in each case. After this discussion, we presented our findings to the interviewees. In case 1, we presented our findings in a presentation, and in case 2, we sent a report with a summary of the outcomes of each interviewee's own interview to the interviewees. Discussions and feedback from the involved PH and PHS officials, and interviewees was used to facilitate our interpretation and contextualize our data. In each case, the data were interpreted by three persons; in both cases, the first author was responsible for the analysis of the raw data; this preliminary analysis was interpreted together with the involved PH and PHS official. Only after they reached full consensus, we presented our findings to the interviewees. In both cases, the interviewees did not have comments on the (results of the) analysis.

### **Position of the researcher**

The researcher positioned herself as an observer and interviewer employed by a public health department within the university. The researcher was present in both municipalities from approximately three months prior to, until approximately three months after the interviews, as part of a broader study in which she was observing the formulation of new local health policies. In this context, the researcher had close working relationships with the municipal PH official and the PHS officials. Although most non-health officials had seen the researcher prior to the interview, contacts with non-health policymakers were not present until the interviews.

## Findings

In the next paragraphs we describe our findings of each case separately using direct quotations from the operational level officials. We describe our findings as factors in their preferred end state, implying that a factor currently functions as a barrier (-) when it is not yet in place, a facilitator (+) when it is already in place or as an uncertain factor (+/-) when it is in place to some extent or if it sometimes functions as a barrier and sometimes as a facilitator. At the end of our results, table 5.1 summarizes those COM-factors.

### Case 1

#### ISC context and actors

In case 1, ISC was seen as a prerequisite for proper implementation of self-governance. Self-governance was described as follows:

*'We invite the residents to say for themselves what they want for their village. And, to put it simply, we may facilitate this (in an intersectoral approach) or not, as the case may be. If it concerns things they can implement for themselves (then the municipal government won't facilitate them).'* (Official for public health)

*'I think that's the strength of integrated collaboration, that you engage the citizens in the early stages of change. And you ensure that they can provide any information as to what is happening in their own neighborhood... It doesn't necessarily have to do with health; it could be in any domain.'* (Official for public works)

Municipal officials reported that council members (i.e., local politicians) had heard about the idea of self-governance in other municipalities and were initiating plans to copy this strategy in their own municipality. Therefore council members attended workshops and took the lead in proposing organizational restructuring. ISC was supposed to be part of the new organizational structure in which officials from 'soft' and 'hard' domains would work within one overarching department with one departmental manager. Officials considered this an ideal structure for ISC. Within the new department some officials would need to function as 'neighborhood representatives' who would channel the feedback from neighborhood councils into the municipal organization; they would be responsible for connecting neighborhoods' issues to the appropriate officials from different policy sectors. In this way, citizens would get a more formal role and power in the policy making process and would ISC become necessary.

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Most officials described this interest in self-governance as a 'trend' within local governments. Only one official framed it as a 'hype':

*'To me it's a bit of a fashionable thing. We have to do this, we have to collaborate more, and so on.'* (Official for civil engineering)

The management level was involved in this process indirectly, not as an initiator, but as the party responsible for the organizational aspects of the change. The municipal PH official (operational level) was responsible for the PH part of the self-governance approach and was supported by PHS officials. The responsible PH official reported to have encountered a lot of resistance from fellow officials in implementing the changes, and had seen the development of a negative attitude towards the municipal manager and the city manager.

### **ISC definition**

Most officials defined ISC as:

*'It means you start to look across departments.'* (Official for public works)

Only some officials from the 'hard' domains defined ISC as collaboration within rather than between sectors:

*'We are already doing our best at our department. We actively seek coordination with other colleagues. As a department (before the re-organization), I wouldn't hesitate to say we're doing pretty well in that respect.'* (Official for engineering)

### **Perceived ISC capabilities**

Officials viewed ISC as new and therefore implementing ISC was often described as a learning process:

*'You shouldn't be under the illusion that (if) you start to work fully in accordance with this principle, then everything will be fine... You'll never have 100% success, but you should try to learn, to learn from your mistakes.'* (Official for civil engineering)

Several capabilities that were considered important for ISC were understanding that most emergent policy issues were multi-dimensional in nature and the ability to overcome the high degree of specialization, since increasing this understanding was sometimes seen as more difficult if officials were very much specialized:

*'What you often see is that everyone has their own, err, their own specialty. That they still relatively rarely see beyond the boundaries of their own department. That often happens only at the very last moment. After a lot of things have already been prepared and specified, and then they might ask for a bit of advice from another department. So then I think, oh dear, why didn't you involve us sooner.'* (Official for transport)

Another important skill that would need to be improved according to interviewed officials was *communication*. Communicating effectively was considered important in order to plan a shared strategy, find a common ground to build intersectoral interventions on, create a shared vision, and establish shared policy goals. Furthermore, process-oriented working skills were considered important since the new way of policy making (i.e., self-governance or bottom-up), required officials to separate the interests of individuals compared to that of the neighborhood. More specifically, officials would need to learn how to ensure they were not progressing individuals but the community. It was especially officials from the 'hard' domains who mentioned that this was often a 'dilemma'. Officials from the 'soft' domains said that the officials in the 'hard' domains lacked creativity and flexibility to overcome such problems, and sometimes this was also recognized by officials from the 'hard' domains:

*'The older officials (in the 'hard' domains) tend to stick to their old ways.'* (Official for public works)

Heads of departments were regarded as being in a position to stimulate the development of these ISC capabilities.

### **Perceived ISC opportunities**

Many opportunity-related factors were found to hamper ISC. The most prominent obstacle in the opportunity category was the hierarchical *organizational structure*. However, most officials expected that several currently separate policy sectors (i.e., expertise fields) would soon be merged, which would increase the ISC opportunities.

In relation to this anticipated new organizational structure, some officials raised concerns regarding the perceived lack of *feasibility* of the proposed self-governance changes. Feasibility was primarily reduced by the perceived lack of clarity about available resources. Especially officials from the 'hard' domains appeared to report this; they expressed that their managers were not obtaining feedback from the officials' day-to-day reality and thus were not able to solve this perceived barrier.

Officials from hard domains explained that their concerns were related to their relatively high amount of obligations in term of national standards and legislations. According to them this was decreasing their *policy free space* (i.e., the number of rules imposed on a policy sector by higher level governments) and thus also their possibility to spend resources on citizens' initiatives that would emerge from self-governance (i.e., no freely allocable budget).

What made this barrier even more salient was that various officials felt that the *workload* was unevenly divided; in their eyes, they were working harder than others, and this was being ignored by the management. Since some officials thus already felt limited in their space to act upon community choices, asking citizens to

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raise 'new' issues in an already saturated agenda seemed unrealistic and put even more pressure on them:

*'I think it's not so much that they don't want to do it, but it's more the organization around them that's not ready for it... So you're attending a meeting of the village council, and you're thinking, well yes, I've also got this problem with that playground, and in fact I have a solution in mind, but well, playgrounds is not my department. That's my colleague's brief, so then you'd have to go and phone that colleague. But that colleague happens to be busy with another project. So that's where it actually goes wrong.'* (Official for public works)

To reduce the workload officials from the 'hard' domain frequently said they needed a 'buffer' between 'idealistic' political ambitions and their own work; when they were constantly distracted by serving (short term) politics, they would never have time to invest in (long term) ISC. Hard domain officials frequently sought ways to express their concerns and as a reaction, other officials developed a negative attitude towards some of these 'hard' domain officials. According to officials from the 'soft' domains, 'hard' domains always seemed to be making derogatory comments and resist change and this reduced relatedness between colleagues and reinforced existing differences in departmental culture. Since unresolved frictions highlighted the pervasiveness of differences in culture between the various domains this often led to 'culture clashes' that functioned as a barrier to approaching officials from other domains (i.e., and thus hampered ISC). Moreover, perceived cultural differences, led to some officials' belief that the only way to implement ISC changes, was by coercion; they suggested that officials who used their 'pocket veto' to impede change would need to be coerced by the head of their department. Nevertheless, officials were generally against coercion, since it would diminish intrinsic motivation. Interviewees in both cases preferred interventions that involved persuasion (i.e., communication to stimulate action) and expressed the need to implement interventions to bring the domains closer together. However, most officials were skeptical about their manager's interest or capability to actually invest in such interventions.

Another opportunity-related factor for ISC was the small municipal size. Officials reported that the small size could either be a barrier for ISC when memories were not so positive or when resources in terms of employees were limited, or a positive contributing ISC factor, because most officials knew each other and could find each other easily:

*'The town hall isn't that big... so in principle each specialist subject has its own policy official, so you know who to contact.'* (Official responsible for cultural affairs and sports, for some aspects of youth policy and sometimes for events and subsidies)

Especially when big events were anticipated all sectors would need to be mobilized and 'normal' obligations to be dropped or neglected (thus limiting the resources that could be used for ISC, but increasing contact). Besides, most officials expressed that in practice, *informal* contacts like chats at the coffee machine, were

most often prompted between officials within one domain because they worked physically closer to each other (in the same building or at the same level):

*'Contacts with the social services department, they're located in the other building, so you don't meet each other that often. When you see them walking around, it's like Oh right, that's also one of ours.'* (Official for public works)

Also the small municipal size affects the municipal budget; in The Netherlands, municipal funding from the national government is distributed according to number of inhabitants and also municipal taxes are raised per inhabitant, thus limiting available resources to implement ISC.

### **Perceived ISC motivation**

All officials were motivated by the idea that citizens want 'integrated' rather than fragmented solutions, and therefore considered ISC necessary. However, officials also noted that citizens were not always interested in PH. This imposed a barrier for ISC, because the self-governance approach required officials to let their work be guided by citizen initiatives. If citizens would not take public health initiatives (which was expected by some officials if they would not put extra effort in motivating citizens to become interested in PH), officials would thus not be motivated to develop or invest in ISC for PH purposes:

*'But there are lots of neighborhoods that seem to say health is an issue for the municipal government to deal with, that's not up to us.'* (Official for public health)

Another motivational barrier was related to the fact that the decision to implement self-governance was made by politicians and some officials perceived the proposed changes as serving political rather than organizational goals. Organizational goals were perceived as being served by allowing professionals to make their own decisions rather than letting citizens decide. As a consequence, the hard domains department's motivation to implement the changes was low:

*'We do notice some resistance (towards the organizational change) within our department (public works).'* (Official for public works)

Additionally, the hard domain officials expected it would increase workload of some officials even more, because besides their normal obligations they would now also need time to handle possible dilemma's that might emerge from stimulating citizens to express their needs. Although the issue of uneven workload was recognized by most officials, some officials framed this argument as a way of defensive reasoning. According to some, 'excuses' popped up soon as their colleagues would need to learn new skills or change their work habits:

*'A public works official, who is only interested in infrastructure, I want to work on roads, the design of roads, and not be bothered with all the fuss being made.'* (Official for public works)



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One Public Works official framed the defensive attitude of his colleagues as a lack of motivation in shifting power to citizens because officials would like to stay in charge and retain their professional autonomy:

*'You notice that everyone prefers to run their own little shop (i.e. achieve their own policy goals).'*' (Official for public works)

### Case 2

#### ISC context and actors

In case 2, the official responsible for PH conceived the idea to strengthen ISC together with a PHS official. Their rationale was that PH could be addressed most effectively if an integrated PH policy was developed. The need to strengthen ISC flowed naturally from this rationale. Prior to conceiving the idea to strengthen ISC, the municipal organization was preparing to merge policy sectors from 'soft' and 'hard' domains within one larger department as part of an organizational restructuring. The PH official perceived that the idea to strengthen ISC for PH fitted well within the anticipated organizational changes. To start the ISC process, the PH official together with the researcher decided it would be helpful if they would explore their colleagues' views on ISC in general and for PH specifically. Therefore, they started interviewing all non-health sectors. In the PH official's words, his goal was to determine:

*'To what extent PH is involved when you (i.e. the non-health sectors) develop new plans.'* (Official for public health)

After data collection, another PHS official, with expertise on developing integrated PH policies, heard about the case and proposed that the municipal managers and aldermen would also need to be involved to support the ISC initiatives. Municipal PH officials, the PHS expert, the PH alderman and the PH manager were therefore invited for a meeting that was chaired by the PHS expert. After this meeting, several intersectoral initiatives to improve PH were implemented.

#### ISC definition

Most officials defined ISC as follows:

*'How do you link PH with other policy areas, and conversely, how do you link a policy area with PH, so you get a two-way interaction?'* (Official for public works)

This 'linking' of health and non-health sectors was considered a learning process, since most officials were not accustomed with making such links.

Officials added that ISC was seen as a way to enable the public to play a bigger role in policy making:

*'We listen to people's wishes. If signals come from the public, we try to respond to them (in an intersectoral way)... Citizens have a large say in their residential environment. You see the same in other municipalities.'* (Official for spatial planning)

### **Perceived ISC capabilities**

Interviewees expressed that one of the most important ISC capabilities was being able to see the multi-dimensional nature of policy issues. PHS officials were perceived as being in a position to stimulate the understanding of PH policy issues:

*'There's not a great deal of knowledge about health among the local authorities. It's certainly not a bad idea to involve the PHS. The Service could be involved from the very early stages of development.'* (Official for environmental department)

Another important capability for ISC was being able to communicate effectively since this would enable policy sectors to create a shared vision and establish shared policy goals. Officials from the 'soft' domains added that officials in the 'hard' domains sometimes lacked creativity and flexibility that were, according to them, required for ISC because barriers would often arise naturally during ISC efforts.

### **Perceived ISC opportunities**

Many opportunity-related factors were mentioned to hamper ISC; especially by the officials from the hard domains. 'Hard' domain officials primarily mentioned the presence of national standards and legislation and the related policy free space (i.e., the amount of rules imposed on a policy sector by higher level governments) as limiting their opportunity for ISC. Officials from soft domains more often mentioned the differences in departmental cultures which was often attributed to the world views or 'nature' of officials who chose to work within the 'hard' domains, compared to those working in the 'soft' domains:

*'They have a different view on certain things. They're people with a different background, a different education. It's hard sector against soft sector. With them it's all about money, bricks and mortar. It's just a different perspective.'* (Official for public health)

*'To put in slightly exaggerated terms, they might say 'You people are always just chattering about all kinds of things', while we might say 'You never think about people'.'* (Official responsible for youth services)

*'It's a huge, or at least major difference of culture, in their approach, their perspective.'* (Official for public health)

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Both hard and soft domains reported that the small municipal size and close geographical proximity to colleagues was facilitative for ISC because people knew each other and thus could easily find each other. Officials perceived that small municipal size could however also hamper ISC when people had less positive personal histories or when officials were responsible for too many tasks and thus were lacking time to invest in ISC. Another opportunity-related barrier that was reported by both hard and soft domains was the current organizational structure; most officials expected that merging of the departments would increase the ISC opportunities although this would be quite time consuming:

*'Well, yes, that means quite a drastic change to the organization. That's been started now, but it's not something that can be implemented overnight (as it requires large investments).'*' (Official for public health)

Another factor limiting opportunity for ISC was the lack of involvement of department managers in ISC. Heads of departments were seen as being in a position to stimulate ISC by restricting the opportunities for *intrasectoral* policy making:

*'That would be my advice, that they (heads of departments) should at least ensure that (they check whether policy proposals are integrated).'*' (Official responsible for youth services, social services, and tourism)

Additionally, one Public Environment official mentioned that having to pay for PH advice by the PHS represented an opportunity-related barrier to involving the PHS during policy developments, especially in times of budget cuts.

### **Perceived ISC motivation**

Even though officials perceived they would most likely not be incentivized for ISC because of the fragmented policy goals and related performance measures, all officials reported to be motivated to implement ISC because they thought that citizens' needs could most effectively be addressed adopting ISC; in their eyes, ISC was essential to deliver good governance services. A downside of the grounding of ISC motivation in the needs of citizens was that some officials perceived that citizens were not always expressing they want 'healthy' options. They perceived that especially commercial or other for-profit organizations (e.g., caterers of sport clubs) and even semi-public organizations (e.g., schools) were therefore more interested in providing unhealthy options; they were more interested in raising revenues than progressing PH. Another factor related to divergent interests, is that officials from the soft domain, sometimes doubted the genuine interest in PH of officials who chose to work within the 'hard' domains. Although this disinterest in PH was not expressed during the interviews with the hard domain officials; instead, they seemed unaware of the health implications of their work, and seemed surprised to discover that health was a much broader concept than they thought it was. 'Hard' domain officials expressed they perceived health as being the absence of illness rather than a concept grounded in environmental determinants for which they were responsible.

Table 5.1 Summarized findings structured in COM factors

Case 1	Case 2
<b>Capability factors</b>	<b>Capability factors</b>
+/- Understanding multi-dimensional nature of policy issues	+/- Understanding multi-dimensional nature of policy issues
- Ability to overcome high degree of specialization	
+/- Communication skills	+/- Communication skills
- The ability to create a shared vision and shared policy goals	- The ability to create a shared vision and shared policy goals
- Process-oriented working skills	
- Learn how to weigh interests of citizens and the public	
+/- Creativity and flexibility	+/- Creativity and flexibility
- Stimulation in learning new capabilities	- Stimulation in learning new capabilities
- Heads of departments stimulate capability developments	- PHS officials stimulate the understanding of PH policy issues
<b>Opportunity factors</b>	<b>Opportunity factors</b>
- Hierarchical organizational structure	- Hierarchical organizational structure
+ Planned merging of sectors within one department	+ Planned merging of sectors within one department
- Feasibility of the proposed self-governance changes	
- Policy free space: National standards and legislation	- Policy free space: National standards and legislation
- Workload high and unevenly divided	- High workload
+/- Small municipal size	+/- Small municipal size
- Reducing culture clashes hard and soft domains	- Overcoming cultural differences hard and soft domains
- Interventions to bring the domains closer together	- Heads of departments restricting <i>intrasectoral</i> policy making
- Heads of departments leading the implementation of ISC	- Involvement of department managers in implementing ISC
- Sufficient municipal budget	- Sufficient municipal budget
- Informal contacts between hard and soft domain officials	- Having to pay the PHS for PH advice
<b>Motivational factors</b>	<b>Motivational factors</b>
+ Beliefs about the ISC advantages for citizens	+ Beliefs about the ISC advantages for citizens
- Belief citizens' disinterest in PH	- Beliefs about public preference for less 'healthy' options
- Perceived goal of ISC - political rather than organizational	+/- Genuine interest in PH among hard domain officials
- Perceived consequences of ISC – increase in workload	- Awareness of the health implications of the work in each sector
- Persistence to change work routines	+ Intention to implement ISC and change work routines
- Feelings of professional autonomy	

## Discussion

In this study we discussed two municipal governments, which aimed to strengthen ISC as an organizational behavior between policy officials with divergent expertise (e.g., health and environment) to address emergent wicked policy problems. The aim of our study was to understand the views of those officials regarding ISC. In each case, we described the ISC context and actors, the definitions given to ISC, and we explored which barriers and facilitators officials from health and non-health policy sectors perceived during their preparation of ISC. To aid interpretation we categorized barriers and facilitators within the theory-based concepts of capability, opportunity and motivation. In the upcoming sections we will discuss the similarities and differences between our cases and recommendations for policymakers and practitioners will be provided.

### **Comparing the cases: main differences and similarities**

The main difference between the cases was the motivation to change. This seemed to be explained by the different contexts in which ISC was initiated and the actors that were involved in preparing the organizational change (Ryan et al., 2008).

In case 1, the interest in ISC was related to a fundamental shift from top-down policymaking (bureaucratically-driven) towards a bottom-up style (community-driven). This would require a shift of both political and bureaucratic power, due to the more formal role citizens would get in the policymaking process. Therefore officials in case 1 would need to let go some of their expert opinions, and take on the challenge of giving away some of their influence (while they know they are the experts) by letting input from citizens guide policy developments. Although officials in case 2 would also need to let go some of their expert opinions and let input from their colleagues guide some policy developments, they would still be in charge of policy developments. In other words, the anticipated changes in case 2 did not require confrontation with established power structures, while in case 1 confrontation with established power would be required. A review of determinants of intersectoral alliances (Tubbing et al., 2012) also found that such changes in the status quo make it more difficult to obtain broad commitment for ISC and this is thus likely to explain the lower motivation for ISC in case 1.

The other case difference was related to the actors who initiated the change towards more ISC; in case 1, local politicians had conceived the idea for change, while in case 2, the idea for change was conceived by one of the operational officials themselves. Politicians were perceived by the operational level as 'imposing' the change on officials, without taking care of feasibility aspects of the change. In case 1, this led to concerns about losing professional autonomy. Especially officials from the hard domain felt that others, primarily heads of departments and local politicians, were ignorant of their concerns and frequently complained about this. Soft domain officials interpreted these complaints as defensive reasoning and this interpretation seemed to arise from a history of negative personal contacts and low levels trust. The combination of the

involuntary top-down character of the change and the poor interpersonal relations between several actors in case 1 seemed to have reduced the motivation for ISC in a substantial way (Himmelman, 2002; Ryan et al., 2008; World Health Organization, 2008; Tubbing et al., 2012).

Besides those case differences, cases were similar with regard to the reactive instead of pro-active approach towards the organizational restructuring, the lack of involvement of managers in the restructuring, and the ISC skills and policy free space of officials working in the soft versus hard domain. In both cases, officials from 'soft' and 'hard' domains would soon be working within one overarching department. Although this new organizational structure at first glance seems ideal for ISC, the restructuring was (at least partly) based on a need to achieve greater efficiency related to budget cuts in municipalities which followed from the Dutch national government's strict budgetary discipline and the economic crisis. To achieve efficiency, often reduction in management and operational level officials is intended, implying that there may have been a mismatch between goals like job security and higher level goals like organizational efficiency (Tubbing et al., 2012). This also explains why, in both cases, managers were not much involved in facilitating the change and why none of the interviewees mentioned the role of the city manager explicitly, although the city manager is formally in a position to direct the organization. So some structural barriers may have been relieved, but not motivated by a drive towards ISC.

Another similarity was found in ISC capabilities of officials in the 'soft' and 'hard' domain; soft domain officials seemed already familiar with some of the ISC skills which those of the hard domains perceived as new. The importance of such ISC skills was also found in previous case studies (Public Health Agency of Canada, 2007; World Health Organization, 2008; Steenbakkers, 2012). Soft domains' officials ISC skills seemed more developed because of their reliance on building alliances with citizens or other organizations to achieve policy goals with (relatively) scarce resources. To build such alliances, soft domain officials are required to adopt an intersectoral perspective (World Health Organization, 2008). Such capabilities are more generic and might explain some of the differences in worldviews of soft and hard domain officials. In contrast, working in hard domains often requires a higher degree of specialization and while resources are relatively larger in absolute terms (compared to those of the health sector) they cannot be spent as one wishes. This is an important opportunity-related factor that seems to be (unintentionally) underestimated by those in the soft domain. Even though PH officials are also working within a legislative framework, the PH framework is much less regulated, implying that soft and hard domain officials work in different cultures and operate from a completely different back ground of which they not always seem aware.



### **Recommendations**

Our findings illustrate the potential of ISC as an organizational behavior to approach wicked problems. To fulfill this potential we recommend that organizational structures become less fragmented because, as Hunter (2009) argues, it is unlikely that collaborative structures overlaid on fragmented working arrangements which have endured for decades will suddenly work: 'they are superimposed on a fragmented and largely tribalistic set of arrangements characterized by different cultures and ways of conducting the business' (Hunter, 2009). To assist working in new collaborative structures we recommend that heads of departments and the city managers support officials in decreasing some of the fears of losing professional autonomy related to some ISC changes and look behind their defensive reasoning. They could for example implement training on how to handle dilemmas in which interests of citizens seem ambiguous and be more transparent about budgets. Additionally, to reduce the culture clashes, it would be important for those in leadership positions to create awareness between officials with different backgrounds. Awareness raising initiatives could involve letting officials from soft and hard domains present each others' work or rotate soft and hard domain officials in each others' work environment. With regard to PH policies, we recommend that PHS officials pro-actively approach non-health officials with advice about how their policies affect health and how they can make their policies more health promoting. PHS officials are seen as a trustable source for health information and thus are in a good position to increase non-health official's understanding of the social determinants of health. Besides, PHS officials themselves need to improve their skills to reframe the health problem so other policy domains understand their influence on health; e.g., by expressing the problem of obesity in economic terms (e.g., Dorfman and Wallack, 2007; Freijer et al., 2013).

### **Strengths and limitations**

A strength of this study is the 'thick descriptions' of two cases that illustrate a unique exploration of ISC in a practical setting (Yin, 2002). Our cases highlight the importance of policymaking for policy and are intrinsically interesting because they provide opportunities to learn from these two cases. Especially because our cases had different ways of approaching the implementation of ISC, heterogeneity in our data, a variation in our sample and the context in which the interviewees worked was realized. Another strength is that we were able to contextualize our data by observing meetings of the PH and PHS officials and were able to reflect together with PHS officials and PH policymakers. Our prolonged engagement with the PH and PHS officials in each case also seemed to increase their openness during the interviews and enabled us to raise sensitive topics, which improved our ability to obtain rich data. A downside of such transparency and prolonged involvement was that our research findings might have been skewed towards more favorable health attitudes. Since all interviewees knew the researcher was situated within a university health department and collaborated with the municipal PH and PHS official(s), officials might have felt the social bias to show interest in health or at least showed more interest in health than they otherwise would (affecting motivation). Reflections with PH officials after the interviews

confirmed this possibility. Furthermore, the involvement of a colleague (the PH official) in interviewing might have affected the willingness to provide sensitive information (e.g., about others within the organization).

A methodological limitation is that we only included two cases with some specific characteristics such as their small size and geographical position. Some recent reviews, however, show that our study is part of a much wider literature (e.g., Tubbing et al., 2012; Nilsen et al., 2013). Further, the small size of our cases might increase the importance of the role of the heads of departments, the fact that officials know each other personally, the type and magnitude of problems that are encountered (typically urban problems versus small-town or village issues), the amount of resources available for PH (lack of resources may act as an incentive to collaboration, while lack of time acts as a barrier), and the different influence of citizens on the policy process (e.g., citizens of small municipalities might have much closer contact with local politicians).

Another limitation that affected the representativeness of our data was the premature nature of ISC which was limiting our ability to get empirical data that describes 'actual' determinants of ISC; due to the limited experience with ISC our findings describe perceived or predicted rather than experienced ISC determinants in the first stages of ISC (Storm et al., 2014). Finally, we acknowledge that we could have examined a broader range of organizational behaviors relevant to the ISC, such as agenda-setting and strategic level leadership or determinants like the official's personality, the organizational history of each case and the specific effect of municipal size. We recognize that a more in-depth exploration of the other concepts might yield additional insights to those provided in our study. At present, it seems difficult to collect such data without being intrusive; it would become too broad and complex for interviewees to address the whole spectrum.

## Conclusion

ISC is perceived as an appropriate tool to address wicked public health problems. However, implementing ISC requires more collaborative organizational structures that set the structural parameters for ISC in a favorable way. To assist working in collaborative structures, we recommend that heads of departments and city managers support officials in decreasing fears of losing professional autonomy (which seem related to some ISC changes), look behind the defensive reasoning of some officials, and merge departmental cultures. Therefore heads of departments and city managers should show leadership and coach their officials. Also PHS officials can play a more prominent role in facilitating the merging of health with non-health sectors, through pro- actively increasing understanding about the multi-dimensional nature of PH and reframe health goals in the terminology of the non-health sector.



## Chapter 5

### **Appendix 5.1 Topic list for the interview protocol**

1. Clarifying the role and influence of the policy sectors: their general policies and more specific policies, policy goals.
2. Identifying interfaces between a particular policy sector and the public health sectors.
3. Exploring to what degree a particular policy actor is aware of health aspects within their sector and of the extent to which they are used to collaborating with the regional Public Health Service or the public health department within their own organization.
4. Investigating what the particular policy sector thinks about intersectoral collaboration with the health sector.
5. Exploring opportunities for more collaboration between health and non-health policy sectors.
6. Detecting barriers to attention for public health aspects in non-health policy sectors.

# Chapter 6

## *Interventions to promote an integrated approach to public health problems*

An application to childhood obesity

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## Abstract

**Background:** Experts stress the need to bring the childhood obesity epidemic under control by means of an integrated approach. The implementation of such an approach requires the development of integrated enabling policies on public health by local governments. A prerequisite for developing such integrated public health policies is intersectoral collaboration. Since the development of integrated policies is still in its early stages, this study aimed to answer the following research question: *‘What interventions can promote intersectoral collaboration and the development of integrated health policies for the prevention of childhood obesity?’*

**Methods:** Data were collected through a literature search and observations of and interviews with stakeholders.

**Findings:** Based on a theoretical framework, we categorized potential interventions that could optimize an integrated approach regarding children’s physical activity and diet. The intervention categories included education, persuasion, incentivization, coercion, training, restriction, environmental restructuring, modeling, and enablement.

## Introduction

Childhood obesity is currently considered an epidemic; prevalence rates have doubled over the last three decades. Globally, approximately 170 million children (<18 years) are estimated to be overweight or obese, and 42 million of them are estimated to be under the age of five (Lobstein et al., 2004; Swinburn et al., 2011; World Health Organization, 2013a). This rapid development has focused much attention on the problem (Lobstein et al., 2004; Schönbeck and Van Buuren, 2010; Schepper, 2011; Swinburn et al., 2011; World Health Organization, 2013a), especially since childhood and adolescent overweight and obesity are associated with lower subjective as well as objective health (Berenson et al., 1998; Britz et al., 2000; Kraig and Keel, 2001; McGill et al., 2001; Puhl and Brownell, 2001; Neumark-Sztainer, 2002; Rocchini, 2002; Schwimmer et al., 2003; Duncan et al., 2004; Daniels, 2006; Analitis et al., 2009; Okosun et al., 2010; Visness et al., 2010; Ottova et al., 2011; Berentzen et al., 2014; Marcus et al., 2012; Sinatra, 2012), often track into adulthood (Freedman et al., 2005), and consequently cause huge rises in health care costs, affecting economic growth (Van Baal et al., 2006; Gortmaker et al., 2011; Mayer-Foulkes, 2011).

With regard to subjective health, studies among children and adolescents from 11 European countries show that overweight or obese children and adolescents have poorer scores on the dimensions of physical well-being, self-perception, social acceptance, and bullying, compared to normal weight children and adolescents (Analitis et al., 2009; Ottova et al., 2011). Another study showed that severely obese children and adolescents experience a quality of life similar to that of children and adolescents with cancer (Schwimmer et al., 2003). Obese children and adolescents are also more likely to seek treatment for depression (Britz et al., 2000), are more likely to be stigmatized and discriminated against (Kraig and Keel, 2001; Puhl and Brownell, 2001), and are more likely to have disturbed eating patterns than normal weight children and adolescents (Neumark-Sztainer, 2002). With regard to objective health, children and adolescents with overweight and obesity are more likely to suffer from metabolic syndrome (hyper-insulinemia, poor glucose tolerance, dyslipidemias, and high blood pressure) (Duncan et al., 2004; Okosun et al., 2010), as well as from type-2 diabetes (Rocchini, 2002), atherosclerosis (Berenson et al., 1998; McGill et al., 2001; Marcus et al., 2012), asthma (Visness et al., 2010), nonalcoholic fatty liver disease (a chronic liver disease that may result in liver cancer) (Wree et al., 2010; Berentzen et al., 2014; Sinatra, 2012), and sleep-associated breathing disorders (Mallory et al., 1989; Bonuck et al., 2012). Moreover, since childhood overweight and obesity often track into adulthood (Freedman et al., 2005), the health consequences related to overweight and obesity frequently persist and culminate later in life. Obese adults are discriminated against in the context of employment, education, and healthcare; they are evaluated more negatively, and negative characteristics are attributed to them (Puhl and Brownell, 2001). With regard to objective health, overweight and obesity in adults are associated with an increased risk of type-2 diabetes (Nguyen et al., 2011), cardiovascular diseases (Manson et al., 1990; Ingelsson et al., 2007),

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myocardial infarction (Hardoon et al., 2012), and several forms of cancer (Khandekar et al., 2012).

In view of these consequences and the related costs, many experts have stressed the need for governments to take action (Gortmaker et al., 2011; Mayer-Foulkes, 2011). Since it is recognized that health, and specifically obesity, is not only influenced by determinants within the health domain, but also by those outside this domain, experts stress the need to develop integrated solutions for this so-called 'wicked problem' (Rittel and Webber, 1973; Roberto et al., 2015). Such integrated approaches need to be developed and implemented by networks of local governments, public and private stakeholders, and health promoters (Verduin et al., 2005; Warner and Gould, 2009; Schepper, 2011).

Health data from New York (Centers for Disease Control and Prevention, 2011) and Massachusetts (Wen et al., 2004) give rise to expectations for the efficacy of an integrated approach to childhood obesity. Experiences in France (Romon et al., 2009) and Cuba (during the so-called 'Special Period') (Franco et al., 2008) also suggest that integrated approaches are effective. Commitment to integrated approaches is formalized in so-called 'Health in All Policies' (HiAP) (Kickbusch, 2009), defined as '*policies in which the most relevant sectors within and outside the health domain collaborate on the aspect of health, in which the common goal is to promote or protect health*' (Storm et al., 2007, p. 11). The development of such policies requires close collaboration with other policy sectors in the early phases of development. This is referred to as 'intersectoral collaboration' (Storm et al., 2007; Hendriks et al., 2014). For most governments, intersectoral collaboration is something new, as each policy sector has so far tended to work on the basis of its own logic and without regard for the impact on other areas of society (Axelsson and Axelsson, 2006).

In recent years, the Dutch national government has stressed the importance of developing an integrated approach for the prevention of overweight in children (Ministerie Volksgezondheid, Welzijn en Sport, 2011), and, in some Dutch regions, the regional Public Health Service (PHS) has implemented training courses to stimulate intersectoral collaboration in developing such an integrated approach for local governments. Although this training course has improved *knowledge* among local government officials about intersectoral collaboration, outcomes in terms of actual collaboration and integrated health policies with regard to overweight prevention have been disappointing (Steenbakkens, 2012). Some causes of the slow development of integrated approaches for the prevention of childhood obesity are the lack of hard scientific *evidence* about the effectiveness of integrated approaches (Health Council of the Netherlands, 2010; Steenbakkens, 2012), a lack of *awareness* of the childhood obesity problem in sectors outside the health domain (Aarts et al., 2011a), heads of departments not being sufficiently involved in the development of intersectoral health policies (Steenbakkens et al., 2011), civil servants lacking the competencies to develop such policies (Steenbakkens, 2012), and process management being insufficiently implemented (Milio, 2001; Jansen, 2007; Steenbakkens, 2012). Additionally, some experts argue

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that the political climate is ambiguous; governments do not seem eager to implement restrictive or legislative policy measures since this would mean they have to confront powerful lobbies by private companies (e.g., Nestle, 2006; Peeler et al., 2011; Merry, 2012).

To overcome these barriers, experts stress the need for a *paradigm shift* in society's current way of thinking about the childhood obesity epidemic (Schwartz and Puhl, 2003; Hunter, 2009); childhood obesity should be regarded as a public health problem instead of an individual health problem (Schwartz and Puhl, 2003).

Three factors might explain why such a paradigm shift has not yet occurred. First, the problem is not yet taken seriously outside the health sector (Schwartz and Puhl, 2003; Hunter, 2009; Aarts et al., 2011a; Mayer-Foulkes, 2011; Merry, 2012). Second, the widespread long-term effect of obesity prevention is not yet widely acknowledged, compared to the limited success of individual-based treatment (Lobstein et al., 2004; Rahman et al., 2011). Third, the potential role of the physical or built environment (e.g., lack of green spaces or playgrounds) (e.g., Feng et al., 2010; Rahman et al., 2011) and the social environment (e.g., parenting style) (e.g., Sander et al., 2003) in preventing childhood overweight and obesity is not yet fully recognized (Swinburn et al., 2011). Thus, compared to people's individual responsibility, society and governments are not yet held, or do not yet feel, responsible for providing healthy-weight-promoting environments (also referred to as leptogenic environments) (Swinburn et al., 1999; Schwartz and Puhl, 2003; Hunter, 2009; Gortmaker et al., 2011; Merry, 2012). In fact, however, the effect of such environments in determining behavior is even more decisive when it comes to repetitive and automatic behaviors such as diet and physical activity (Kremers et al., 2006; Kopelman et al., 2007); environments that offer immediate rather than long-term benefits for healthy diet and physical activity options can be expected to result in improvements in population health (Rothschild, 1999; Thaler and Sunstein, 2008; Department of Health, 2010; Marteau et al., 2011). This approach to influencing behavior is also called 'nudging' (Thaler and Sunstein, 2008). Examples of nudges are designing stairs with prompts that encourage people to use them, or making fruit freely available in schools during lunch breaks. The implementation of nudges is attracting interest from governments (e.g., Department of Health, 2010; Health Council of the Netherlands, 2010; Ministerie Volksgezondheid, Welzijn en Sport, 2011) since it seems to fit in with the trend among them to be reticent about interfering in private lives of citizens (Merry, 2012). Local governments can implement nudges for individuals directly by changing the physical environment, but can also indirectly stimulate organizations in their municipality to implement nudges by developing policies (e.g., by subsidizing organizations that market healthy food products for children).

In theory, the best way to design and implement environments that promote physical activity and healthy diets is by means of integrated approaches. Integrated health policies formalize such approaches, and not only enable sectors within the health domain, but also local stakeholders outside this domain to

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change their environment and implement health promoting nudges. Local governmental policy sectors should collaborate in order to develop such policies.

To examine which interventions might be effective in supporting local governments in the development of integrated health policies, we aimed to answer the following research question: *‘What interventions can promote intersectoral collaboration and the development of integrated health policies for the prevention of childhood obesity?’*

## Background

In order to provide some background information to the reflections presented in this paper, we first describe the theoretical framework used in this study and the Dutch local policymaking system.

### Theoretical framework

We reflected on possible intervention functions using the theoretical framework developed by Michie et al. (2011). We adopted this framework since it provides a clear structure for categorizing intervention functions and linking them to an analysis of the behavior of actors within the policy process. Since we aimed to explore what possible interventions might be effective, rather than finding ‘the best’ intervention, the framework by Michie et al. (2011) could help us answer our research question. The framework was originally developed for the assessment of interventions intended for the traditional target population of health promoting interventions, such as intermediaries (the people who deliver the intervention) or the ultimate target group (the children), but in this study the framework was applied to behaviors of policymakers, who are the *enablers* of such interventions. Intersectoral collaboration was originally developed to predict the behavior of the target population. In the original framework, intersectoral collaboration might therefore be placed in the outer circle of ‘policies’ (e.g., as a guideline or regulation) (Michie et al., 2011). We interpreted intersectoral collaboration as a target behavior of policymakers and therefore regard it as a behavioral goal although we recognize this interpretation might be confusing (figure 6.1).



Figure 6.1 The Behavior Change Wheel, adapted from Michie et al. (2011)

The framework is based on the argument that behavior is determined by the following three resources: motivation, capability, and opportunity. If one of these resources is lacking or insufficiently present, behavior change interventions might be needed to increase the likelihood of achieving a particular behavioral goal. Policies can hinder or enable the implementation of certain interventions. Intervention functions might include education, persuasion, incentives, coercion, training, restriction, modeling, and enablement (Michie et al., 2011). These strategies can be used to stimulate intersectoral collaboration, which should ultimately lead to integrated health policies for the prevention of overweight in children.

### The Dutch local policymaking system

Within Dutch municipal governments, three levels of actors are involved in developing integrated health policies: actors at the strategic level (the relevant alderman, the mayor, and the municipal council), the tactical level (heads of municipal departments), and the operational level (the administrative system, consisting of civil servants) (Jansen, 2007; Derksen and Schaap, 2010).

At the strategic level, the local political system consists of a mayor, who is not elected by local citizens but appointed by the national government, and a coalition of local politicians and aldermen who are elected every four years. This implies that the ruling political coalition can change the direction of the local policies every four years. At the tactical level, the heads of the departments manage the work processes within the administrative system. At the operational level, officials from the health department work together with the PHS to develop the public health policies (Hoogewerf, 1998).

The PHS is formally an extension of the health department of the municipal government, which means that the PHS staff belongs to the local government's administrative system. The degree to which the PHS is involved in policy making



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depends on the needs of the municipal government. Governments with larger health departments are more likely to have the capacity to draw up policy documents themselves, so their need for assistance from the PHS is usually less, while smaller municipalities often lack the capacity to develop these policies and thus delegate tasks to the PHS (Hoogewerf, 1998).

Avoiding administrative fragmentation and developing intersectoral policies requires vertical collaboration between each local government level as well as horizontal collaboration within these levels (Axelsson and Axelsson, 2006). Vertical collaboration refers to the collaboration between the relevant aldermen, the heads of municipal departments, and civil servants within one policy sector. Horizontal collaboration refers to the collaboration between the policy sectors at each level (Jansen, 2007; Steenbakkers, 2012).

Since governmental agencies have a typically hierarchical organization structure, the decision to develop a new policy usually comes from one of three centralized sources at the strategic level within the municipal government: new national legislation that forces the municipal government to develop a new policy, a request from the municipal council for a new policy, or a decision on the part of the local aldermen that it is important to develop a policy. If the initiative stems from actors at the strategic level, the 'College of Mayor and Aldermen' all have to agree that it is in the interest of their municipality to prioritize a particular problem and develop policies for it. If they agree, a policy proposal is prepared by staff at the municipal Department of Public Health and PHS staff, who explore how the problem can be solved. Since multifaceted problems like the childhood obesity epidemic cannot be solved by a single sector, collaboration with other policy sectors is important at this stage (Hoogewerf, 1998). In practice, however, such collaboration is hardly ever established (Steenbakkers, 2012).

After the (intersectoral) policy proposal has been approved by the heads of municipal departments, collectively known as the management team (MT), the College of Mayor and Aldermen receives it for a final review. When they approve the proposal, it is presented to the municipal council. The council has the final decision to accept or reject the policy proposal; they have to be convinced of the importance of investing scarce resources in a particular approach to a particular problem. If the proposal is unclear, councilors can ask the relevant alderman to explain it. The alderman may be supported in this task by civil servants of the municipal government and the PHS, who can be asked to give a presentation or work out the policy proposal in more detail. Since the municipal council members are democratically elected, it is important for them to examine whether the interests of the citizens are served by the policy proposal. Since council members are elected every four years, policies that result in actions that are visible to citizens within a four-year timeframe are important for council members who want to be reelected (Hoogewerf, 1998; Derksen and Schaap, 2010).

### Methods

Data were gathered on the basis of a framework approach (Pope et al., 2000) derived from Michie et al. (2011) (figure 6.1). Interviews with stakeholders, observations at meetings of the regional PHS, and reading the relevant literature were conducted iteratively.

The first author went to the participants' offices to conduct the interviews and attended meetings at the PHS. The researcher was able to attend all meetings at the PHS through her job at the Academic Collaborative Centre. Since we wanted to evaluate whether the framework could be applied in a local government environment, we held interviews with participants from the three levels within the municipal government, and other important stakeholders who were familiar with the local government's situation. The interviews were recorded and had an open character. Two questions were pertinent to all interviews: *'How does political commitment for the prevention of overweight in children come about?'* and *'How does intersectoral collaboration for the prevention of overweight in children come about?'* When interesting comments were made on a particular intervention, the researcher probed the participant for more details.

The analysis involved evaluating the interviews by listening carefully to the recordings. This analysis led to the selection of relevant parts of the interviews in order to search for common concepts, and specifically for comments on interventions. The interviews were interpreted further by analyzing these relevant parts of the written transcripts of the interviews. Quotes from the interviews are used to reflect on potential interventions presented below.

Twenty interviews were held with actors at the strategic, tactical and operational levels within Dutch local governments, supplemented with personal observations at meetings of the PHS of the South Limburg region in 2011. At the strategic level, five persons were interviewed: one mayor and four aldermen and one former national politician (who had previously been an alderman). At the tactical level, one secretary of the Board of the PHS, one head of a PHS department, and one head of a municipal department were interviewed. At the operational level, 10 civil servants from the local government were interviewed, as well as two project leaders of a program that supports municipal governments throughout The Netherlands. Observations were made at 20 meetings within the PHS.

In addition, the literature on intervention strategies for intersectoral collaboration was reviewed. Our review started by exploring the basic literature recommended by experts within the field, looking for important concepts and other relevant literature. This 'snowballing' search method yielded a range of important studies. Google Scholar was used to support the retrieval of the papers thus identified. When current articles could not be found through Google Scholar, we continued our search using other databases such as PubMed. In this way, additional studies and theoretical frameworks were explored. Based on the articles, thus, identified,

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we searched again in a range of data bases. We applied minimal exclusion criteria during our search. Some of the key concepts we looked for, but without exclusively limiting our search to them, were intersectoral collaboration, cross-sectoral collaboration, intersectoral action for health, bridging intersectoral gaps for health, interventions/tools/strategies for inter-/cross-/multi-sectoral collaboration, local governments, collaborative governance, and politics of intersectoral collaboration. This approach was expected to yield a good impression of the interventions discussed in this paper. This implies that our literature review was not exhaustive, which we considered acceptable since the aim of this study was to provide a panoramic view of possible intervention strategies, rather than a narrow literature review on specific interventions.

Furthermore, since we did not find enough literature on interventions that is specifically related to the promotion of intersectoral working methods for childhood obesity prevention within the municipal government, we also drew on literature from other scientific disciplines, such as organizational and political sciences. Finally, intervention strategies were discussed with stakeholders.

## Findings

This section presents the reflections based on the literature, interviews, and observations on nine possible interventions strategies to promote intersectoral collaboration and the development of an integrated approach for the prevention of childhood obesity within municipal governments.

### Education

Education implies increasing knowledge or understanding (Michie et al., 2011). Creating awareness through education is especially important for problems such as obesity, for which norms among the public are slowly deteriorating, and which are therefore difficult to detect. Comparing the current norms with ideal norms, or the norms in other countries or groups (e.g., high versus low socioeconomic status groups), might increase awareness and the likelihood that the problem of childhood obesity is put on the political agenda. One mayor said:

*'This is an important role for education... Health is something citizens do not see.'*  
(Mayor)

Apart from increasing awareness, education might also be used to change the frame that dominates the discourse on a topic, since *'nothing is a risk itself until it is judged to be a risk'* (Stone, 1997), which is especially relevant for wicked problems for which the problem definition depends on ideas for solving it (Head, 2008). Actors at the strategic level might not regard themselves as being responsible for preventing childhood obesity, just as they neglected responsibility for tobacco prevention for years (Klein and Dietz, 2010). Education might serve as a way to point out the gains from investing in childhood obesity prevention; if a financially oriented alderman understands that prevention of childhood obesity will lead to

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higher work productivity later in life, he or she might become interested in investing in prevention. Ultimately, this results in co-creation by aldermen in different policy sectors. One alderman reported how education had changed his view on ways to solve the childhood obesity problem:

*'Six years ago, in our previous term of office, the college of mayor and aldermen once attended a talk by a professor, who confronted us with the statement that we have created an obesogenic society. Everything is based on comfort; nobody wants to ascend a flight of stairs these days...When you enter a public building, if you look for a lift you'll spot it immediately, but if you're looking for the stairs, it takes forever, and you'll find it tucked away in some obscure corner... You always first have to go through a phase of raising awareness before the College takes up the issue... It touches on so many aspects (mentions all the relevant aldermen)... So you see it's like a fan, it fans out to include the whole College. If you really want to promote health policy, it's not so much like a bundle, but more like a skewer that cuts across all policy domains.'* (Alderman responsible for public health)

However, although awareness of a particular problem might seem the most logical step towards recognizing it, actors at the strategic level often do not base their problem definition on objective analysis, but rather use it as a *strategic* activity to gain support for their point of view (Stone, 1997). Merely educating actors at the strategic level by presenting epidemiological data can, therefore, not be expected to result in agenda-setting for childhood obesity. Tailored information adapted to the portfolio of the relevant aldermen is more likely to result in effective education. However, presenting epidemiological data can boost agenda-setting for those who are still unaware of the existence of the problem. Policy sectors are not always aware of the way their policies influence health; education might increase awareness among all policy sectors, including those not involved in health (Aarts et al., 2011a). An official of a municipal environmental department commented:

*'There's not a great deal of knowledge about health among the local authorities. There isn't the knowledge. It's certainly not a bad idea to involve the Public Health Service. The Service could be involved from the very early stages of development. We might invite them over. Other departments are willing to do that.'* (Municipal environmental department official)

Evaluating the effects of previous policies is another way to increase awareness. However, previous attempts to create such awareness by introducing policy instruments like the Health Impact Assessment (Mannheimer et al., 2007) have shown that awareness is not always sufficient to obtain commitment from other policy sectors.

### **Persuasion**

Persuasion means that communication is used to elicit or enhance positive or negative feelings, or stimulate action (Michie et al., 2011). Providing *strategic* information is intended to persuade, rather than to educate (Milio, 2001). For example, informing aldermen about the possibilities for the development of the

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currently popular ‘public-private partnerships’ as a way to implement policies is expected to stimulate political commitment for the prevention of overweight in children. By whom people are persuaded depends on the social networks in which they operate (Murphy and Shleifer, 2004). Among policy actors, such networks are referred to as ‘policy networks’ (Kenis and Schneider, 2001). To integrate political values and beliefs, actors in the political arena need to possess *political* arguments and *negotiation* skills:

*‘You have to convince people and show them... why we think this is important (referring to the integrated approach to the problem of childhood obesity).’*  
(Alderman responsible for public health and spatial planning)

Since actors in the political arena have different interests than those at the operational level, promoting intersectoral collaboration among civil servants requires a different set of interests to be combined. This means that it is important to know how to adapt to the *rationality of others*. If, for example, the PHS cannot adapt to the mindset of politicians, certain health problems will not be put on the political agenda. The municipal council members and aldermen are elected every four years by individual votes and need to distinguish themselves in some way to be reelected; they need success stories based on individual health gains. The ability of the PHS to demonstrate individual progress, illustrated by narratives, is therefore expected to be more persuasive to politicians than the way the PHS currently tries to persuade them (by presenting epidemiological data). PHSs have recently recognized the following:

*‘On the other hand (i.e., apart from the civil servants and the Board) you’re also dealing with politics. When it came to the really crucial aspects we made sure we were present at all committee meetings, all council meetings, to explain and illustrate. So in that sense we’re really investing efforts in those people... Which is often difficult, in politics it’s not always the factual arguments that count. You can produce a 500-page book full of factual arguments, but that doesn’t mean anything to them, it gets you nowhere. You have to be able to use the kind of arguments that count for them, and you have to know which ones they are.’* (PHS official)

Frames that dominate a discourse can be used to justify investing resources into intersectoral collaboration for the prevention of childhood obesity rather than in others problems. This is why reframing is such an important ability for actors in the policy context (Dorfman and Wallack, 2007). It implies that just as much effort should be invested in the presentation of data as in the data itself; information for politicians should be simple and sensible, while civil servants (the operational level) need more in-depth information about the causes and solutions.

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The politicians' task is to make the complexity of real-world problems understandable, while actors at the operational level should find out exactly what a problem entails and how it can be solved:

*'So you have to look for those arguments that interest them... and that has nothing whatsoever to do with the actual health-related arguments... If you see these people (i.e., politicians and administrative officials) often... so that you know what they're interested in (then you know what arguments to use).'* (PHS official)

The difference between reframing and argumentation lies in the *associative* feelings that frames can elicit. For example, politicians sometimes claim that dietary intake and physical activity behaviors should not be controlled by government, but are the responsibility of individual citizens. Such claims are hard to counter with rational arguments since they refer to ethical rather than rational issues (Phillips et al., 2011). Additionally, heuristic arguments are more important than the quality of the argument if people have a low personal involvement with the topic at hand (Petty and Cacioppo, 1986). Hence, it is important to know how to reframe the debate (Dorfman and Wallack, 2007).

### Incentives

Incentivization means creating expectations of rewards (Michie et al., 2011), as in marketing (Rotschild, 1999):

*'So personal affinity is something that, I think, if you want a political commitment, that's what you have to look for. It means too little is being invested in... In my view, in the roots of the rulers (Social marketing aimed at politicians). Very much so... That's marketing... Cola... Those guys are always studying what 12-year-old kids like. That's all they ever do all day... It's that simple.'* (Former politician and alderman)

The lack of incentives and the presence of disincentives for intersectoral collaboration within the governmental system might explain the slow development of such collaboration. A political system could also incorporate a reward system that more directly incentivizes civil servants who work across sectors, for example, by giving bonuses, or that works indirectly through creating a supportive culture:

*'I think the head of a department can do a lot about this. As head of department, you can concentrate on guarding your own department's interests, and everyone will keep doing their own things, but you could also adopt a more open and positive attitude. And you can challenge your staff a bit more. You can focus on your own domain, but there are also interfaces with other domains, so you should also spend some time on that. You shouldn't just stick to your own little territory.'* (Head of municipal department)

What works as an incentive for a person depends on their values (Eccles and Wigfield, 2002), so it is crucial to have a thorough understanding of the actors for whom an incentive is being developed. For example, if a municipal council member wants to be reelected (the incentive), what matters to them are votes, and this

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person will invest in policy topics that attract votes: a way to provide incentives. One alderman said:

*'Most council members are not terribly interested in health policy. It just not sexy, to use that word. It's not cool. What they're interested in is housing, spatial planning. That's what they like. Because that's what citizens ask them about. They talk about the pavement being new, or grass not being mown in time, or a tree not being pruned in time. Those are the things they notice. But health policy, that's something citizens don't see... So it's really visibility that... What is it, what are the consequences, what's in it for me. That's the first question any council members asks... And they are politicians, right? They're politicians. They want to score with the electorate... They want to be reelected in four years' time, or now even in three years. Be reelected to the council. And what are citizens interested in? That tree and that pavement. Not in not being fat or such things.'* (Alderman responsible for public health and spatial planning)

Another alderman said that he had been reelected because the municipal government had invested in the prevention of childhood obesity; he had made his efforts visible by attracting media attention, which improved the town's image:

*'(What you need is) a kind of motto you can link to your town. '(Town's name), a Healthy City'. That's sounds good, right? That's where you want to live, that's where you want to work, that's where you want to spend your leisure time.'* (Alderman responsible for public health)

Investments in childhood obesity prevention are expected not to diffuse quickly within municipalities because the relative advantage of investing in childhood obesity prevention is still an abstract concept to most politicians, and visible results in terms of body mass index are only observed in the long term, beyond the four-year timeframe of most politicians (Derksen and Schaap, 2010). Thus there is a need for increased effort by the PHSs to highlight relative advantages and make health progress more visible (Rogers, 2003).

### Coercion

Coercion means the use of punishment in the form of penalties or disincentives (Michie et al., 2011). One civil servant suggested that managers could coerce civil servants if they refused to collaborate with colleagues from other policy sectors, resulting in health policies that failed to become integrated:

*'We sign our proposal... Then the head of the department initials it, then the secretary initials it... If along the way nobody looks at integration, or, in the end that's where the drive should come from... so go back to the drawing board... That will be uncomfortable at first, but it forces people to think.'* (Civil servant at municipal health department)

However, the expectation of coercion might also have adverse effects. Since the governmental system rewards civil servants who work without failures, most civil



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servants engage in risk-avoiding behaviors (Van den Brink, 2006), which may suppress creativity (Amabile, 1998); if heads of departments express skepticism about each innovation, such as initiating intersectoral collaboration, civil servants will be unlikely to initiate it (they will experience this as a disincentive). Additionally, if innovations (e.g., new rules for working methods) are forced upon civil servants, they might be perceived as a threat, making the manager's efforts result in oral agreements which will never be implemented. A lack of congruence between the values of the managers or the organization and those of the employees might develop into what is known as a 'façade of conformity' in the latter. In order to survive or succeed within the organization, employees might act as if they embrace the organization's values whereas they do not act upon them (Hewlin, 2003). Therefore, rules are expected to be better enforced by 'carrots' (promises of rewards to compliers) than by 'sticks' (threats of punishment to non-compliers) (Rotschild, 1999).

### Training

Training is intended to increase skills (Michie et al., 2011). A recent evaluation of a training course for civil servants that was intended to increase their skills for intersectoral collaboration showed that although the course was effective in terms of increasing knowledge about integrated health policies, it did not result in more intersectoral collaboration and integrated approaches to childhood obesity in terms of concrete actions. This was attributed to the fact that the civil servants and alderman were often replaced after they had attended the course, or the civil servants involved did not have sufficient time to put the acquired skills into practice. Another cause of this poor outcome of the training could be that the skills were not 'hands-on' enough and got stuck at the level of knowledge, making it look more like education. This lack of opportunity eliminated the effect of the training (Steenbakkers, 2012). One alderman responsible for public health commented as follows:

*'Well, I think... there are enough training institutes that regard an integrated approach as their mission and that can help you. We've seen that at the PHS. To me, that was a real eye-opener. I mean, I'm not involved in health care myself, but I thought it was very, it was an eye-opener. And I think that if people get this eye-opener and then perhaps they themselves can, err, training the trainer or whatever it's called. Training the trainer? Yes, training the trainer. You could introduce that sort of thing too. But I think it's often a matter of the penny having to drop. You have to see the advantages. The gains.... You have a particular objective, for instance regarding health, like achieving a healthy weight, and you then see that you, well, you tend to think mostly about diets and dieticians and that sort of thing. But as soon as you take a broader view, a whole new world opens up.'* (Alderman responsible for public health)

Training to improve policymakers' adaptive skills is especially important in the case of childhood obesity prevention since the solutions to this 'wicked' public health problem (Rittel and Webber, 1973; Head, 2008; Weber and Khademanian, 2008) may depend on the problem and opportunities to implement solutions in



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the local situation. For example, defining which stakeholders should be involved in the effort to empower parents to stimulate their children to become physically active and eat healthy food requires the municipal government or PHS to investigate which organizations are active in the environment of the individual children or their parents. This knowledge may not be available beforehand but should be proactively sought. After the stakeholders have been identified, each stakeholder should be stimulated to collaborate. This requires strategic modes of operation, which means adapting to their interests. Many experts have therefore emphasized the importance of the skill to increase the capability of leaders to persuade stakeholders (e.g., Hunter, 2009). A former politician stated:

*'You have to convince your colleagues. Hundreds of books have been written about how to do that. You just have to master those techniques. You can read about these things. All those things have to be... It's not a matter of being right. I was convinced I was right for eight years. It's a matter of convincing others you're right.'* (Former politician and alderman)

### **Restriction**

Restrictions, which may be imposed for instance by laws and regulations, are rules that define which behaviors are not allowed (Michie et al., 2011). For example, local governments are not allowed not to allocate resources for public health issues; the Dutch public health law obliges local governments to take care of public health and develop a health policy document every four years (Rijksoverheid, 2008). One alderman said that this stimulated his involvement in childhood obesity prevention. Some rules are defined at national level, to prevent citizens from being subjected to a different set of policies in each municipality:

*'So this municipal autonomy is sometimes a good thing as it's close to the citizens. Those municipal officials quickly realize what's going on and can take tailored measures. But the disadvantage is that you might end up with a patchwork of different measures in different municipalities.'* (Mayor)

In The Netherlands, adherence to such rules is monitored by the Health Inspectorate. They concluded that, in recent years, devolvement of tasks to local governments (which started three policy cycles ago) has yielded disappointing results (Inspectie voor de Gezondheidszorg, 2010). So although local governments do produce health policy documents, their quality is not always sufficient.

The national government also imposes rules on civil servants and managers within the municipal government; the municipal management team (MT) is formally charged with checking whether the health policies developed by the civil servants are coordinated and integrated (Steenbakkers et al., 2011).

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In everyday practice, however, the MT only checks if such rules are adhered to in terms of financial aspects. One alderman of public health referred to the following:

*'You can develop a procedure on paper, but as I just said, if it remains a piece of paper it won't work. So if you... Because you do of course need to have it, because we do have a procedure here and it does work. And there's the stamp of approval from the finance department. That works. And why does it work? Because we all know that if that stamp of approval isn't there then nobody in the College of Mayor and Aldermen is willing to say yes. Right? That's very black-and-white, but that's how it is. And that's how it should be here.'* (Alderman responsible for public health)

### **Environmental restructuring**

Environmental restructuring means changing the social or physical context (Michie et al., 2011). Social context refers to the political and public interests or the culture within an organization, while the physical context refers to the institutional design (Goodin, 1996), the organizational structure (Mintzberg, 2008), or the geographic proximity of colleagues from other policy domains. Both contexts are expected to be closely interconnected; some municipalities expect that changing the organizational structure will lead to a change in the organizational culture (e.g., Hoeberigs and Eurlings, 2010). For example, one municipal public health official commented that intersectoral collaboration with her colleagues from the spatial planning department was poor because they were located in another building. It is expected that when people are put together in the same space, they are naturally more inclined to discuss certain topics. Things like meetings increase physical proximity and therefore create social opportunities.

*'So first of all it's important that those officials around you that you have to depend on to achieve something, that they, that they can agree with the ideas you want to realize in the end. And what I then, I'm just speaking for myself now, what I usually do is that I sound out my fellow aldermen. I think that, well, you just raise the topic of overweight prevention. How can we deal with that? And then it's a matter of making sure you're prepared, that you've thought about ways to tackle the problem. By getting round the table with the parties involved, by organizing things in spatial planning and so on. I could name a few more.'* (Alderman responsible for public health)

Political and public interests are similar to the concept of 'politics stream' introduced by Kingdon (2003), and the concept of 'social-political context' proposed by Paulussen et al. (2007); it includes the national government and the laws and regulations it imposes, the organized political forces, civil servants at important positions, the network of organizations within the community, and other problems that prevail in the community and attract attention.

Institutional design refers to organizational structure. Mintzberg (2008) distinguishes different types of structures to match different organizational purposes (Unger et al., 2000). The theory of institutional design refers to these changes in an organization's structure as 'organizational restructuring' (Goodin,

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1996). Environmental restructuring includes changes outside the organization (e.g., the national culture or organizational climate), while organizational restructuring only refers to changes within the organization (e.g., the organizational structure). Both environments determine (indirectly) why innovations are adopted or rejected (Rogers, 2003; Paulussen et al., 2007). For example, in some Dutch regions, the PHS has implemented a training course that aimed to increase the skills of civil servants to collaborate with other sectors. Although the civil servants adopted the new idea of working collaboratively, the organizational structure hampered the implementation of new working practices. Hence, the innovation was not implemented and did not continue after being adopted (Steenbakkers et al., 2011). Future attempts to stimulate intersectoral collaboration may thus require organizational structures to be changed at the same time. Examples of such attempts by governments are the implementation of E-government systems (Ho, 2002; Zhikui et al., 2010), intersectoral work teams, and matrix structures (Mintzberg, 2008). Matrix structures organize work based on a project or theme (e.g., the environments in which people live) rather than a subject (e.g., spatial planning). One municipal public health official commented as follows:

*'People within our department and the other departments are not engaged in public health. However, we expect that the new department structure (referring to the new matrix structure being developed for the municipal government) will change many things.'* (Public health official)

### Modeling

Modeling means providing an example that people can and want to copy (Michie et al., 2011). Modeling an intended behavior change is based on classical learning theories, in which a person develops associations through observation. Bandura's (1977) Social Learning Theory argues that a person becomes motivated if certain behaviors and the consequences of those behaviors are observed in a role model who is 'walking the walk.' Such a model can be a person, an organization or a concept, as long as it is an example that includes an association between a cause and an effect.

A person can only be a role model if the observer can identify with him or her, or is in a similar situation. For example, after a politician has retired, he or she might still be interested in working in the political field, but in a different role, working as a role model or entrepreneur for childhood obesity prevention might be a way to stimulate others in the same situation to copy their entrepreneurship. Examples of such role models for national and local governments include First Lady Michelle Obama in the United States (Schepper, 2011), and former politician Paul Rosenmöller in The Netherlands (Jongeren op Gezond Gewicht, 2010).

Organizational practices can also be used as examples to stimulate other organizations to adopt the same practices (Paulussen et al., 2007). Some organizations, for example, stimulate their employees to engage in exercising, and such policies can be copied by other organizations (e.g., Yancey et al., 2004). If a

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large part of the organizational network adopts a certain innovation, it increases the likelihood that others will also adopt (Paulussen et al., 2007). Examples make abstract concepts, like intersectoral collaboration, more concrete and motivating.

*'Yes of course you have to make it concrete. Otherwise it won't work. You just have to tackle a specific case and say, listen, this works. That's what I found, at the PHS at the time, that's what I thought was very good. They used this example... I think it's that one, with the high-rise building with those lifts and the stairs... Yes, I found that... As soon as you hear something like that you think, wow, yeah. Anybody could have thought of that, but nobody did.'* (Alderman responsible for public health and spatial planning)

Previous research found that heads of municipal government departments reported intersectoral collaboration to be difficult to achieve because there were no concrete examples (Steenbakkens et al., 2011). PHSs could, therefore, assist municipal authorities by providing such examples, like the program called 'Youth on a Healthy Weight' (which is known in Dutch by the acronym JOGG). JOGG gathers examples and disseminates them, in a planned and systematic campaign, among their network of local governments (Jongeren op Gezond Gewicht, 2010).

Additionally, social interests may change through modeling; if citizens observe that children's health is improving in another but similar municipality, the municipal council might become motivated to copy the measures taken in the other municipality:

*'But at another municipality they're doing a lot more, or doing less about overweight. What effect do you think that has on our citizens? The citizens see that Oud-Beijerland, our neighboring municipality, they're doing this and that about overweight... And citizens see this and they talk to the council members and say why aren't we doing something like that? So then the council members at a certain point start to say, they're doing this and that in Oud-Beijerland, and we're doing nothing. Don't we have this problem here, mister alderman? It's just because they see it happening elsewhere.'* (Alderman responsible for public health and spatial planning)

### **Enablement**

Enablement means increasing opportunities for removing or dealing with barriers, not including training, education, or environmental restructuring (Michie et al., 2011). Barriers to intersectoral collaboration at the strategic level might be removed by having two domains combined in one alderman's portfolio:

*'So public health and spatial planning currently happen to be the responsibility of the same alderman... And that means I can make the link between spatial planning (and childhood obesity prevention)... But then it is mine, that's where you get integration.'* (Alderman responsible for public health and spatial planning)

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A frequently mentioned barrier to implementing integrated health policies is the lack of time to manage the process. Process managers in public health often have too little time to complete tasks, or they may not be replaced if they become ill or change jobs. This barrier might be explained by the lack of involvement among heads of departments (Steenbakkers et al., 2011). This lack of leadership at the tactical level makes the organizational culture less supportive (Gray, 2009), which might be a barrier to the development of integrated health policies:

*'You can make your own integrated little plan (at the operational level), but it should also be targeted at (the tactical level).'* (Municipal public health official)

However, if civil servants, despite the support of their managers, do not know how to develop such policies, they could overcome this barrier by consulting experts. And, in the absence of the boundary-spanning skills of a project coordinator, an external project coordinator with such skills might be appointed. One official at a non-health-related department identified the fact that external advice is always not offered free of charge by the PHS as a barrier to involving the PHS in their policy development:

*'For some reason, the PHS is not consulted... It's only when you ask a very specific question... that there are some agreements (between the municipality and the PHS) on what's included in the standard package of what the PHS is involved in within the municipality, but if it's not specific (when the question is not included in the standard package) we have to pay for it...'* (Municipal environment official)

Inflexible agreements might, therefore, represent a barrier to non-health-oriented policy sectors consulting PHSs. More flexible agreements, enabling municipal authorities to ask for health advice free of charge, might increase the involvement of the PHSs in developing non-health-related policies. Easy access to advice seems especially important to improve the collaboration with the non-health sectors since it often happens that a health recommendation clashes with the interest of non-health sectors. For example, if a spatial planning official is advised to reverse his plans in such a way that the city centre becomes less car friendly, he might expect at least some resistance from car owners. If he is also forced to pay for such advice, his motivation to ask for it is likely to decrease.

### Discussion

Without governments that promote healthy nudges or restrict unhealthy ones in existing environments, the childhood obesity epidemic is expected to be difficult to bring under control (Thaler and Sunstein, 2008; Marteau et al., 2011). Integrated health policies, which are developed through intersectoral collaboration, seem to be the ideal way to design and implement sustainable environments that stimulate physical activity and healthy diets. Integrated approaches not only enable sectors within the health domain but also local stakeholders outside the health domain to change their environment (Storm et al., 2007; Kickbusch, 2009). This may stimulate the implementation of successful interventions to promote a healthy weight. Promoting this development should be based on reflections about various interventions to promote intersectoral collaboration and the development of integrated health policies. At each level within the municipal government, a different set of interventions is expected to be most relevant. Relevance of interventions is expected to be related to the actions that need to be performed by actors at each level; strategic level actors, for example, are responsible for the decision to adopt the idea and therefore need to be persuaded rather than trained. Based on these considerations, the relevance of the various interventions is discussed below, followed by a brief discussion on the methodology of the present study.

#### **Interventions aimed at the strategic level: impossible only means that you haven't found the solution yet**

Education, persuasion, and incentivization are probably most important interventions for actors at the strategic level; they need to be persuaded that investing in childhood obesity is urgent and receive incentives to overcome party-political and -organizational self-interests. Other strategies seem less important here since they tend to focus on capability and opportunity. These are more important at the lower levels in the municipal hierarchy. This is in line with Jansen's (2007) views; strategies to increase collaboration between niches at the strategic level include brokering, sidestepping the formal system, lobbying, and agenda-setting. All these strategies can make use of persuasion and incentivization (Rotschild, 1999, Murphy and Shleifer, 2004). Kingdon (2003) also maintains that agenda-setting for a new policy appears when a problem is recognized at a certain point in time (which can be achieved by increasing knowledge about the problem and by persuasion), when the way to solve the problem is accepted (which can be achieved through brokering) and when the political climate is favorable (which can be achieved by offering incentives to decision makers). However, before persuading an actor at the strategic level, they should be made more aware of the urgency of solving the problem (Rogers, 2003). Providing narratives that illustrate an individual's health progress is thought to be educational and persuasive to actors at the strategic level. After that, persuasion techniques are necessary to cross-boundaries or broker between the actors from the health and non-health sectors; they should solve the problem together. Using interpersonal channels is

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very important for such brokering. It makes persuasive communication more effective, which is especially important since the health and non-health policy sectors have a niche character (Rogers, 2003; Jansen, 2007). Providing incentives for investing in childhood obesity prevention is, therefore, expected to compensate for the difficulty of the persuasion efforts and increase the relative advantages for those involved (Rogers, 2003; Public Health Agency of Canada, 2007). Stakeholders, such as PHS staff, who are trying to influence the development of integrated health policies, should therefore have sufficient knowledge about what could constitute an incentive for the actors at the strategic level. Programs such as JOGG (2010) seem to possess such knowledge: they proactively increase the visibility of aldermen's actions through media attention and use role models with whom actors at the strategic level can identify.

### **Interventions aimed at the tactical level: mobilizing the troops**

Education, training, and modeling are expected to be especially important for actors at the tactical level; these actors need to be aware of the requirements for facilitating intersectoral collaboration (e.g., making it a priority and therefore allowing time to be spent on it) and be aware that childhood obesity is a problem that is best approached in an integrated way. Furthermore, actors at the tactical level need to know how to manage the process of intersectoral collaboration to produce integrated health policies. Improving specific process management skills with regard to intersectoral collaboration is regarded as useful in this respect (Milio, 2001; Jansen, 2007). Managers from commercial organizations or successful heads of departments from other municipal governments can educate or train actors at the tactical level. In order to have the right influence or to be opinion leaders, they need to be similar to the actors they are educating or training, but possess more skills to perform process management. Furthermore, commercial organizations may have more know-how about tools which can support the task of process management to increase intersectoral collaboration (e.g., E-government systems) (Ho, 2002; Zhikui et al., 2010). Learning from commercial organizations' best practices involves the intervention functions of education, training, and modeling. Modeling is expected to be particularly relevant. However, it seems that learning from others' experience is often rejected by actors at the tactical level; municipal governments seem to be rather introverted organizations. Additionally, previous research has concluded that staffing or recruitment policy is an important strategy for actors at the tactical level (Jansen, 2007). This can be stimulated through education and training.

Heads of departments can recruit civil servants who are 'team players'; recruiting individuals who are skilled and willing to collaborate will increase the likelihood that they will initiate and sustain collaboration, compared to civil servants who are incapable and unmotivated to collaborate. Besides focusing on hiring the right individuals, the tactical level also seems very important as regards developing the right organizational culture. Kotter (1996), who is an expert on leading organizational change, emphasizes the need to create a change-friendly culture by creating a continuous sense of urgency to improve performance. Leaders within



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the organization should continuously reinforce alertness and curiosity, instead of greeting it with skepticism (Kotter, 1996; Amabile, 1998).

### **Interventions aimed at the operational level: don't blame the foot, if the shoe doesn't fit**

Training, environmental restructuring, and enablement seemed to be particularly important for actors at the operational level; they need to be competent to work across sectors, and at the same time they depend on actors at the tactical level to allocate scarce resources, such as time. Restructuring the organizational environment, for instance, by rearranging the workspace and creating a supportive organizational culture, is usually controlled by higher-level actors. Environmental changes can stimulate actors at the operational level to initiate and sustain collaboration (Kotter, 1996). This is line with Steenbakkers (2012) and Jansen's (2007) suggestions; operational level changes can only be sustained if they are supported by higher-level changes. Blaming individuals should therefore be avoided. Steenbakkers (2012) also suggest that training should focus on increasing civil servants' ability to adopt a problem-based approach and to formulate concrete long-term goals. Additionally, barriers that emerge during change processes can be overcome through a proactive and creative approach by civil servants. Instead of thinking along a straight line, divergent thinking skills can enhance their ability to come up with a wider range of solutions to overcome any barriers. Increasing the available time can be achieved through prioritizing but can also be achieved by consulting the regional PHS. Moreover, PHS staff can use the experience they have gained in previous training courses to prepare civil servants to overcome previously identified barriers (Steenbakkers, 2012).

### **Limitations**

A weakness of the present study is its methodology. We chose to derive arguments from the interviews rather than from a detailed examination of certain hypotheses or cases through systematic analysis. Although we are fully aware of this limitation, we adopted this approach since we aimed to explore the field inductively first. In our further studies, we will systematically collect and analyze such data, and we want to encourage other researchers to do the same.



### Conclusion

Actors within municipal governments may or may not be motivated or able to develop integrated health policies for the prevention of childhood obesity, but they are nevertheless asked by outside stakeholders to do so. Awareness of a whole range of interventions can help such stakeholders to rethink ways of stimulating or assisting municipal authorities in addressing children's physical activity and dietary habits through policy development.

Regional PHS staff can be used to persuade and incentivize actors at the strategic level by showing them success stories based on individual health gains, or by making health progress more visible within a four-year timeframe (the time to reelection of council members and aldermen). Programs that incorporate a wide range of such interventions can be tailored to the needs of the actors involved. These needs may differ depending on the stage of knowledge about the innovation (Rogers, 2003) (e.g., the need to be educated before being persuaded) or other conditions specific to the targeted actor (e.g., the rearrangement of their workspace).

Diffusing the development of integrated health policies is assumed to start with knowledge about the topic (Rogers, 2003). This knowledge should be available nowadays since the Ottawa Charter already mentioned the need for integrated health policies in 1986 (World Health Organization, 1986), and several training courses to stimulate their development have been implemented among municipal governments in recent years (e.g., Steenbakkers, 2011). To take the diffusion of this innovative working method a step further, interventions should be implemented that can accelerate the decision to adopt and implement the integrated approach to childhood obesity prevention by municipal governments. Hence, programs that persuade and support municipal governments should be developed and disseminated. A good example is the Dutch JOGG program (Jongeren op Gezond Gewicht, 2010; Borys et al., 2012).

Future studies should examine the behavior change techniques and procedures used in programs that incorporate interventions to stimulate the development of the integrated approach to childhood obesity prevention within local government. This knowledge can be used to survey the full range of intervention options available, and to select rational options from among them.

A black and white photograph of a beetle rolling a large ball of dung on a sandy surface. The beetle is positioned in the lower half of the frame, pushing the ball towards the right. The background is a vast, flat, sandy landscape under a bright sky.

# *Chapter 7*

## *Perspectives of Fijian policymakers on the obesity prevention policy landscape*

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## Abstract

**Background:** In Fiji and other Pacific Island countries, obesity has rapidly increased in the past decade. Therefore, several obesity prevention policies have been developed. Studies show that their development has been hampered by factors within Fiji's policy landscape such as pressure from industry. Since policymakers in the Fijian national government are primarily responsible for the development of obesity policies, it is important to understand their perspectives.

**Methods:** We interviewed 15 policymakers from nine Fijian ministries. By applying the 'attractor landscape' metaphor from dynamic systems theory, we captured perceived barriers and facilitators in the policy landscape.

**Findings:** A poor economic situation, low food self-sufficiency, power inequalities, inappropriate framing of obesity, limited policy evidence, and limited resource sharing hamper obesity policy developments in Fiji. Facilitators include policy entrepreneurs and policy brokers who were active when a window of opportunity opened and who strengthened intersectoral collaboration.

**Conclusion:** Fiji's policy landscape can become more conducive to obesity policies if power inequalities are reduced. In Fiji and other Pacific Island countries, this may be achievable through increased food self-sufficiency, strengthened intersectoral collaboration, and the establishment of an explicit functional focal unit within government to monitor and forecast the health impact of policy changes in non-health sectors.

## Background

Fiji is one of the 22 Pacific Island countries (PICs), which have a combined total population of 10,566,500 people (Statistics for Development, 2014). In total, 56.8% of Fiji's population is indigenous Fijian, 37.5% are Indo-Fijian and 5.7% are from other ethnic groups (Fiji Islands Bureau of Statistics, 2011). Fiji contains 332 islands of which one-third are inhabited, covering a total land area of 18,333 square kilometers within 1.3 million square kilometers of the South Pacific (World Health Organization, 2011). The PICs share regional commonalities: a narrowly based economy, limited national infrastructure, and aid dependence (Wyber et al., 2009). Nowadays, they also share an epidemic of non-communicable diseases (NCDs) such as coronary heart diseases and diabetes (The Ministry of Health, 2010; World Health Organization, 2014c).

In Fiji, 82% of all deaths are attributed to NCDs, contributing to rising health care costs and challenges to economic growth as adults are affected during their most productive years. So, even though infectious diseases have declined and health care has improved, these NCDs have caused life expectancy to stagnate at a low 69 years. One cause of this NCD epidemic is the rapid increase in obesity, which is largely due to poor diets and low levels of physical activity (PA). This not only disproportionately affects Fiji, but also many other small island nations such as Nauru and Tonga where overweight rates vary between 94% and 97% (World Health Organization, 2014c). Although data on regional trends are limited, it is estimated that 56.2% of adults and 14.5% of children in Fiji are overweight (Schultz et al., 2007). Interestingly, women are significantly more overweight than men, indigenous Fijians are more overweight than Indo-Fijians and urban children are more overweight than rural children (Ministry of Health and Medical Services, 2010).

The severity of the obesity epidemic is even more urgent than in many high-income countries, because many obesity-related NCDs go untreated in Fiji. For example, one NCD survey found that 16% of all diabetics between the ages of 25 and 64 years did not know they had diabetes, and among those who knew, 2.1% were not on medication and 32.2% were on medication but had uncontrolled fasting blood glucose. Therefore, diabetes is the most common cause of non-traumatic amputation and the second most common cause of adult blindness in Fiji (Ministry of Health and Medical Services, 2010).

Globalization, urbanization, and acculturation lead to an environment that promotes unhealthy dietary intake and sedentary PA patterns. Although daily food intake traditionally consisted of large quantities of relatively healthy starchy roots, green leaves, fish, coconuts, and fruits, dietary studies show that urban populations now consume a high proportion of less-healthy foods (many of which are imported), such as flour, sugar, sugar-sweetened beverages, unhealthy oils, canned fish and meat, and fewer locally produced foods. PA patterns have also

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become more sedentary, especially in urban centers (World Health Organization, 2003b; Ministry of Health and Medical Services, 2010).

The Fijian Ministry of Health and Medical Services has recognized that changing this 'obesogenic' environment is important and they aim to change the environment through 'Policies and action on common NCD risk factors through multi-sectoral collaboration' (Ministry of Health and Medical Services, 2010). The current national public health policy states that prevention should be comprehensive and multi-sectoral (i.e., integrated (Hendriks et al., 2014)) and explicitly describes policies to address Fijians' diets and PA practices (Ministry of Health and Medical Services, 2010). However, although policy changes are occurring, their development often fails. Barriers related to collaboration between health and non-health sectors within government and the society are often seen as the underlying problem (Thow and Hawkes, 2009; Thow and Snowdon, 2010; Thow et al., 2010a,b). For instance, industries were required to collaborate with the Ministry of Health and Medical Services and the Ministry of Finance, Public Enterprises, Public Service & Communications in the implementation of a sugar-sweetened beverage tax policy (Thow et al., 2010b), but they saw it as an unpleasant task because their revenues were based on consumption so discouraging it counteracts their interests.

Many countries and especially other small island nations experience similar barriers that are often found in the 'policy landscape' (e.g., Thow and Snowdon, 2010; Hendriks et al., 2013b). The policy landscape includes interacting factors relevant to the policies under consideration, which determine the policymakers' opportunities for developing policy. These similarities have led to the growing importance of understanding the policy landscape worldwide. One way to achieve such an understanding is through the application of dynamics systems theory with its commonly used metaphor of the 'attractor landscape' (Thelen and Smith, 2006). An 'attractor landscape' can be seen as the context in which policymakers work (see figure 7.1). The ball in figure 7.1 can be seen as the Fijian policymakers, where the top of the hill may reflect a policy that has been successfully developed to prevent obesity. For example, in the last years, the Fijian government has implemented several fiscal policy measures targeting the prices of fruits and vegetables, sugar-sweetened beverages, and palm oil (Snowdon and Thow, 2013). Further implementation and sustenance of the policy will be relatively easy as the ball rolls down the hill. As the ball reaches the 'basin,' the behavior of the policymakers is likely to remain stable, as dynamic systems theory assumes that elements in a system prefer a stable state that may mimic habitual routine behavior (Thelen and Smith, 2006). To develop *new* obesity prevention policies, the ball (policymaker) would need to get out of the basin (the status quo) and exert effort (arrows pointing upward) to climb the mountain to arrive at a new obesity prevention policy. However, there will also be forces that make the slope of the hill steeper. An example is changes to agricultural and fishery policies that encourage trade, which result in dependence on low-quality food imports, which in turn lead to decreased access to local healthy food. These forces have to compete with

economic interests, thus affecting the effort Fijian policymakers must exert to create new policies.



Figure 7.1 The landscape and the Behavior Change Ball: The proposed relationships between the theoretical concepts from the Behavior Change Ball are best illustrated by the metaphor of a ball moving through a landscape.

Since policymakers are primarily responsible for developing policy, it is important to understand their perspectives (Stevenson et al., 2008). However, empirical data about the viewpoints of Fijian ministry policymakers about the broader policy landscape is not often described. Instead, most studies in Fiji and other small island countries focus on the barriers present during the development of a single obesity prevention policy measure (Thow and Hawkes, 2009; Thow and Snowdon, 2010; Thow et al., 2010a,b, 2011). It is difficult to generalize the results from such studies to develop a set of *comprehensive multi-sectoral* (i.e., integrated) policy measures that involve several policy sectors (Hendriks et al., 2014).



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Currently, we only have a limited view of the policy landscape. As the development of obesity prevention policies is salient for many countries and barriers are not expected to be specific to Fiji, our goal is to describe the shape of the wider obesity prevention policy landscape, using Fiji as an example. This can help in forecasting difficulties that need to be overcome in future attempts to develop obesity prevention policies and can stimulate learning from abroad. Moreover, it is relevant to consider the policy context as an 'attractor landscape' in general because it can provide broader insight into the development of obesity prevention policy.

## Methods

### Data collection

We collected data through interviews with policymakers within the Fijian national government. Ethics approval was obtained from the Fiji National Health Research Committee, Ministry of Health and Medical Services, Suva, Fiji. To prepare for the interviews, the policy literature was reviewed and the first two authors (Anna-Marie Hendriks and Mere Y. Delai) brainstormed about obesity prevention policies each ministry could potentially develop. Thereafter, they jointly conducted all the interviews. Anna-Marie Hendriks was affiliated with the Ministry of Health and Medical Services' health policy and research department for five months and Mere Y. Delai was a public health official working at the health policy and research department of the Fijian government in which this study took place.

We used an adapted semi-structured interview guide from a previous study on the development of integrated public health policies (Hendriks et al., 2013a). Our approach was to first focus on the development of integrated (i.e., comprehensive and multi-sectoral) public health policies in general and then to focus on integrated policies for the prevention of obesity. We assumed that this approach would reveal more information than narrowing down our focus too early. To arrive at a more accurate interpretation of the data, the two interviewers reflected on each of the interviews afterwards and compared notes. Their reflections were entered into the reports that were also used in the data analysis.

### Sample

The 11 ministries that were most likely to affect the development of obesity prevention policies were invited for a one-hour interview. Each ministry received additional information about the study and was asked to select a policy representative. Our goal was to interview at least one representative from each ministry; only when interviewees indicated that other representatives could complement their interview did we opt to speak with extra interviewees from the same ministry. All the ministries were willing to participate, but two declined because of time limitations or because the ministry said that no representatives were available during the research period (January-May 2014). In total, 15 representatives from nine different ministries participated (table 7.1). Representatives included three Permanent Secretaries, three Deputy Secretaries,



three Departmental Managers, and six operational-level policymakers. Operational-level policymakers were often interviewed because they could complement the information given by their managers or secretaries. We attained data saturation regarding the factors in the policy landscape after these 15 interviews.

Table 7.1 Interview sample, F= Female, M = Male

Interviewed Ministries	Role in obesity prevention	Participants (n) - Total (15)
Ministry of Youth and Sports	Sport and youth policy	Official 1 (M)
Ministry of Maritime and Rural development	Assistance schemes in poverty alleviation, farming	Official 2 (F)
Ministry of Defense National Security and Immigration	Food security, safe PA environment	Official 3 (M)
Ministry of Industry and Trade	Limiting import of unhealthy products	Officials 4(F)
Ministry of Health: NFNC, Food Unit, Wellness Centre, Policy Unit	Health education and promotion, NCD strategy	Official 5 (F), 6 (M), 7 (M), 8 (M)
Ministry of Education	Health promoting schools	Official 9 (M)
Ministry of Finance, Revenue Section	Taxes for sugar sweetened beverages, unhealthy foods	Official 10 (F), 11 (M), 12 (M)
Ministry of Local Government and Urban Housing, Suva City council	Designing attractive PA environment	Official 13 (M), 14 (M)
Ministry of Agriculture	Food self-sufficiency	Official 15 (M)

### Data analysis

All interviews were summarized and coded using MaxQDA software (2014). Because we were interested in the policy landscape, we coded themes that provided barriers or facilitators within the ‘opportunities’ of the Fijian policymakers. These opportunities were defined as ‘factors that are lying outside the individual Fijian policymaker and make the development or implementation of obesity prevention policy possible or prompt it’ (Michie et al., 2011). The attractor landscape metaphor (Thelen and Smith, 2006) was used to aid thinking about the difference between distal and proximal opportunity factors and to provide codes. When opportunities were more distal to policymakers, we coded them as forces that steepen or flatten the slopes of the mountains in Fiji’s policy landscape. When factors were more proximal to the policymakers, we coded them as factors within the ball (i.e., as efforts the Fijian policymaker should invest in to reach the top of the mountain; figure 7.1). Data was categorized under a code after consensus between the two researchers was reached. Even though we also recognized the importance of motivational and capability related factors during policymaking, they will not be discussed in this article.

## Findings

We will now give an overview of barriers to and facilitators of opportunities for Fijian policymakers. Poor economic situation, low food self-sufficiency, framing of obesity, power inequalities, and lack of evidence are opportunities within the policy landscape, while limited resource sharing, window of opportunity and intersectoral governance structures are opportunities within the ball. Results do not include data from the literature, but only report the perceptions of the interviewed Fijian policymakers.

### Poor economic situation

Four interviewees mentioned that because Fiji has high poverty rates, it is important to be extra careful to avoid unintended policy effects on economic development and income. For example, one interviewee mentioned that they cannot implement a ban on food vendors selling around schools because this could push families into poverty:

*'It is very difficult, if you prohibit marketing of food around schools. For example, there is one family who sells in front of a school. Each day, children buy sweets there. If we prohibit it, this family will lose their income. And these are the poorest families.'* (Interviewee from the Ministry of Health and Medical Services)

### Low food self-sufficiency

A barrier often mentioned by interviewees was Fiji's low food self-sufficiency due to a poorly organized agriculture sector. Although lots of local food processing is done (e.g., by Flour Mills of Fiji and Punjas), interviewees often mentioned that there is insufficient production of healthier and/or fresh food to meet the dietary needs of all Fijians. Therefore, interviewees often mentioned that Fijians were increasingly reliant on highly processed and often imported foods. Although interviewees also mentioned the role of local food processors in the onset of obesity, imported foods were considered to be one of the main causes of the current obesity epidemic. Imported foods were perceived often to be highly processed and to have high fat and sugar percentages. One interviewee said that reliance on such less-healthy foods was greater in urban areas due to the absence of land for subsistence agriculture (i.e., self-sufficiency farming). This interviewee explained that because, for decades, most Fijians lived by growing food only for their own needs, there was no need for rural Fijians to develop a more commercially oriented agriculture sector. As a result, these farmers have a poor attitude towards production for sales (i.e., commercial farming):

*'Extension officers (those who train the farmers on how to commercially farm) visit localities, but encounter a difficult mentality. When farmers want to drink kava and are not interested in farming more than they are used to, why would they? Export-oriented production and even internal market promotion is limited.'* (Interviewee from the Ministry of Agriculture, Rural and Maritime Development and National Disaster Management)

He added that it is difficult for farmers to develop competitive food prices and a well-organized profitable agriculture sector; the poor infrastructure in many farming areas leads to high transportation costs, making it difficult to transport products from villages to farms, from farms to markets, and from the outer islands to the main islands. Moreover, two interviewees explained that it is challenging to develop competitive food prices because Fiji has a small market (881,065 citizens in 2013), which makes it difficult to compete with multinationals on worldwide access to markets.

### **Framing of obesity**

Although most interviewees cited the changing food supply (i.e., more processed foods containing higher fat and sugar percentages) as the main cause of obesity, they also frequently related the issue to changes in Fijian culture and Fijians' individual eating and PA preferences. Six interviewees explained that in the Fijian culture, 'big is beautiful,' suggesting that obesity is often seen as desirable. Almost all interviewees mentioned that even though there seems to be an ongoing mixed preference for both robustness and thinness with Fijian society, the food industry plays an important role in reinforcing the idea that Fijians are not interested in losing weight or eating healthily. Three interviewees seemed to have adopted this framework from the food industry; they took the lack of impact from price increases on sugar-sweetened beverages as evidence for the legitimacy of this framework. Interviewees explained that Fijians would only look at the present. This different time perspective (i.e., 'vakaviti') reduces interest in preventing future consequences (e.g., weight gain) and therefore the impact of, for example, a sugar tax:

*'There did not seem to be a decrease in consumption of the products (referring to sugar-sweetened beverages and tobacco) that had recently increased in price due to tax policies. This is surprising given the poverty rate. Not the price determines consumption, but awareness. Thus, in the end, the poor get poorer due to increasing food prices and therefore there needs to be a balance.'* (Interviewee from the Ministry of Finance, Public Enterprises, Public Service and Communications)

According to these interviewees, this problem is also apparent in the lack of effects from several tobacco prevention policies: tobacco price increases did not lead to a decrease in tobacco consumption in Fiji. In addition to this cultural framework, all the interviewees framed obesity as an individual health problem caused by poor food and PA choices. For example, one interviewee said that many Fijians perceive the preparation of breakfast to be too time-consuming an activity because they traditionally used to cook breakfast. Many interviewees also reported a poor attitude towards PA in daily living. Therefore, all the interviewees said that Fijians should be made aware of these practices; only then would obesity prevention policy have an impact. Most interviewees recommended interventions based on individual determinants of obesity, such as increasing understanding that breakfast can be quick and does not necessarily require cooking for hours or that PA is not bound to sport activities but can be integrated into daily living by, for instance, walking to the office rather than taking a cab.

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### Power inequalities

A constraining factor often mentioned by interviewees was the power inequality between Fiji's government and international actors such as the World Trade Organization (WTO) and the food industry. For example, one interviewee from the trade sector mentioned that the WTO has a clear liberalization agenda that has been formalized in trade agreements that prohibit member states from imposing barriers to free trade. Two interviewees mentioned that it would therefore be difficult to develop policies that limit the import of unhealthy food. They explained that unless there is clear evidence that imports can damage the country in terms of, for instance, safety or health, the Fijian policymakers were concerned about the possibility that they could be taken to some form of international dispute settlement or arbitration for banning unhealthy foods. A major concern was the potential cost of such action for the Fijian government. Interviewees perceived the lack of resources as a factor that makes Fijian policymakers powerless.

Moreover, there was a perception that there is still scarce evidence that the use of specific products (e.g., Coca-Cola instead of sugar-sweetened beverages in general) leads to obesity. So even if the resources existed, it might still be hard to provide evidence to defend policies in an international context.

Furthermore, interviewees mentioned that multinationals sometimes use their monopoly as providers of certain products to Fiji to hamper the development of obesity prevention policies. The food industry could, for example, threaten to leave Fiji's market if the Fijian government imposed more stringent food import policies. Another interviewee mentioned that the food industry could hamper implementation of television marketing policies:

*'Developing policies that limit the exposure of children to advertising of unhealthy food products is difficult because the big food producers sponsor most programs and without such sponsorship it is difficult to produce television.'* (Interviewee from the Ministry of Health and Medical Services)

One interviewee added that the food industry sometimes uses the lack of clarity around the legal definition of a child to postpone child marketing regulations. In response, three interviewees used United Nations conventions as 'back-up' legislation to form a basis for asserting the right to good quality and healthy food in obesity prevention policies. By using such human rights documents, some of the power inequality could be restored:

*'United Nations conventions emphasize the right to food, access to food. Food security is part of national security because it protects citizens from lack of food or a low quality of food. In this regard, the Ministry of Agriculture plays a big role forming the basis for the right to good quality and healthy food.'* (Interviewee from the Ministry of Immigration, National Security and Defense)

### **Lack of evidence**

There is a lack of evidence about what works for Fiji's relatively young population. One interviewee said that the development of NCDs must start during childhood because the youngest generations suffer from NCDs and the age of deaths in this cohort is very early (16% live beyond 50 years of age and only 8% live beyond 60 years). However, this interviewee said that most policy evidence is derived from countries with relatively older populations and is thus not suitable for Fiji, a place in which 60% of the total population is under 30 years of age. For instance, to increase the font size on food labels, one would need to obtain sufficient evidence that food labels actually affect the consumer behavior of young Fijians. Many interviewees said that this gap in evidence is likely to persist due to a lack of resources within the Fijian government to facilitate policy evaluation. Therefore, it is currently difficult to determine the feasibility and effect of certain obesity prevention policies and to convince actors from non-health sectors that they have responsibility in obesity prevention:

*'The most important question for the unit is to ask, 'Will it make a difference?' This argument drives changes in the food industry. If you can make it very clear that it will make a difference, chances are bigger that regulations will be implemented. Otherwise you can expect a lot of resistance from those who implement the policies.'* (Interviewee from the Ministry of Health and Medical Services)

This makes it difficult for Fijian policymakers to convince or force the food industry to take a role in obesity prevention. On a more positive note, many interviewees mentioned the significant role policy brokers from universities play in generating evidence.

### **Limited resource sharing**

Two interviewees from the Ministry of Health and Medical Services explained the Fijian government has limited policy resources and that sharing resources for the development of integrated obesity prevention policy are essential. All interviewees explained that resource sharing is difficult because non-health policy sectors within the Fijian government, non-governmental organizations (NGOs) in the health, food, and beverage industry, the WTO and policy implementers often have goals other than obesity prevention and that going against these goals would be difficult. For example, two interviewees said that the promotion of exports is high on the government's agenda due to the import-export imbalance. Due to very strict EU regulations, one of these interviewees mentioned that the Fijian government needs to focus most resources on controlling exports:

*'Export policies are also determined and controlled by the Ministry of Industry and Trade. They determine the standards with which Fiji's products should comply in case they want to export with other countries. Since the EU has very high and strict standards, Fiji should be very careful; otherwise they might lose a market.'* (Interviewee from the Ministry of Health and Medical Services)

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This interviewee said that, as a result, there are fewer resources available to control the import of health-damaging products. The related political risks and costs are often so high that it is most often avoided, even though, in theory, it would be possible to amend other policy sectors' agendas. Due to the notable difficulties in aligning policy agendas, most interviewees mentioned that extra effort is required to develop a shared agenda. Two interviewees explained that it is difficult to achieve this, as Fiji has a small workforce charged with developing policy. They mentioned that building partnerships is an alternative strategy to overcoming resource scarcity. However, they believe that the quality of relationships with health NGOs is poor:

*'There are no collaborating NGOs on health nutrition; the only one that is present is funded by Vodafone. They, however, do not align their work with that of the National Food and Nutrition Centre; for example, they approach the same schools that are also health-promoting schools, instead of approaching different schools.'* (Interviewee from the Ministry of Health and Medical Services)

One interviewee mentioned that the Ministry of Strategic Planning, National Development and Statistics did not invest in building partnerships with private organizations or NGOs at the beginning of the policy cycle. This interviewee perceived that this hampered policy implementation due to poor public-private partnerships. It was expected that investing in building partnerships at the beginning of the policy cycle could remove barriers for resource sharing with NGOs or other private organizations. Currently, interviewees perceive the feasibility of most obesity prevention policies to be low.

However, one interviewee mentioned that the recent shift from a top-down towards a bottom-up policymaking style contributes to building partnerships. According to this interviewee, the current government involves stakeholders in conversations more frequently and empowers citizens since it realizes it cannot achieve its goals alone. Collaboration with citizens and also with other governmental departments is considered to be key in the current government. It is expected that enforcement mechanisms would then require fewer resources because policy implementers would be more likely to accept the policy change. In other words, enforcement mechanisms and resources would only be required if policy change were not accepted.

Some interviewees said that the biggest challenge in developing certain policies is related to the difficulties in aligning policy implementers' belief systems. For example, if teachers would not align their academic goals with health goals, extra health inspection staff would then need to be hired to check whether teachers were complying with health promotion requirements such as implementing PA classes. Obtaining such extra resources would be difficult due to the limited budget for preventive public health policies. Some interviewees added that Fiji's communal culture makes it difficult to work without official stringent enforcement mechanisms because Fijians would not easily report noncompliance.

Another positive contribution to resource sharing is the work of policy entrepreneurs and policy brokers within and outside the Fijian government. They promote a strong integrated vision around obesity prevention, help the current government recognize the problem, are active in overcoming incompatible policy priorities in other sectors, and are active when a window of opportunity opens. As the main ministerial office, the Prime Minister's Office is tasked with monitoring the government's implementation activities, along with the Ministry of Health and Medical Services' Wellness Centre, Food Unit and National Food and Nutrition Centre. These were often mentioned as the most important policy entrepreneurs within government. Outside government, the Pacific Research Center for the Prevention of Obesity and Non-Communicable Diseases (C-POND) and the Secretariat of the Pacific Community (whose Public Health Division is dedicated to improving the health of Pacific Islanders) were often mentioned as entrepreneurs. Policy brokers were often people affiliated with universities who are involved in creating conditions to establish network contacts (e.g., through workshops) and policy evaluation.

### **Window of opportunity**

One interviewee referred to a recent UN meeting as a 'window of opportunity' to facilitate and progress development of obesity prevention policy. In 2011, the Fijian government attended a United Nations High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases in New York, which increased its willingness to invest in obesity prevention policy. Other interviewees referred to the increased recognition of obesity by the current government as a direct outcome of the Pacific Island countries' Health Ministers meeting. Another window of opportunity factor noted by policymakers from the National Food and Nutrition Centre was the flexibility of the current regime (before 2014 elections), which gave them the opportunity to present during cabinet meetings:

*'We should educate the Cabinet about the nature of public health; health is not a sole responsibility of the Ministry of Health but is affected by the policies of other sectors. Currently, most cabinet members have a vague understanding of what health contains. Education by staff of the NFNC (National Food and Nutrition Centre) is more effective than the Minister of Health himself, since staff is much more engaged on the topic.'* (Interviewee from the Ministry of Health and Medical Services)

Most interviewees also viewed the 2014 election (which was under preparation during the time these interviews took place) as a window of opportunity for presenting important issues pertaining to the welfare of the wider population, such as the obesity prevention policies. The general idea stemmed from the fact that during the pre-election period during which the interim government's decision-making was centralized, it could be easier to pass progressive policy proposals (e.g., making child marketing rules stricter).



### **Intersectoral governance structures**

The most proximal factor (i.e., that which Fijian policymakers can most easily affect) is the development of mutual agreements and policies between Fijian ministries to strengthen intersectoral collaboration for obesity prevention policies. One interviewee referred to a memorandum of understanding:

*'Recently, more collaboration has been initiated with the Ministry of Health. We were both on our way to a symposium in Brisbane and met at Nadi airport. In Brisbane, we came to the idea that we wanted to apply for a grant that the university gave, for those who wanted to improve health and sports. We did not get the grant, but after that the relationship (with the Ministry of Health, Wellness Centre) was established (referring to a memorandum of understanding in which the intention to collaborate was formalized). This collaboration started in 2012.'* (Interviewee from the Ministry of Youth and Sports)

The Ministry of Health and Medical Services' Public Health Act is currently being reviewed after almost 80 years. In recognition of the role the environment plays in the onset of NCDs, a recommendation about the development of intersectoral policy measures to prevent NCDs was part of the submission towards the reviewed act.

Furthermore, some interviewees mentioned that the military regime (which was recently reelected) established a national roadmap for change based on the People's Charter and a National Strategic Plan. Interviewees said that these documents are facilitative because the National Strategic Plan is implemented through a system of key performance indicators that recommend intersectoral collaboration during policy developments. Although interviewees said that this new intersectoral collaboration reporting framework was difficult to implement, this is facilitative for intersectoral collaboration in theory.

Interviewees also added that intersectoral governance structures could be improved by developing an explicit Health in All Policies strategy. Within this strategy, it was recommended that a formal position for an official to implement the strategy be created. A person in such a position would need to be active in building networks for obesity prevention and also monitor and forecast the health impact of policy changes in non-health sectors.

## Discussion

The aim of our study was to describe the perspectives of Fijian policymakers on the obesity prevention policy landscape. We illuminated Fijian policymakers' efforts to develop obesity prevention policy (i.e., reach the top of the mountains) and described how several factors make it more difficult. We will now discuss four themes that may make the obesity prevention policy landscape more conducive towards the development and sustained implementation of obesity prevention policies in Fiji and other PICs.

Firstly, Fijian policymakers need to integrate health priorities with economic priorities and share resources. For example, Thow et al. (2011; 2014) outlined how increasing taxes on sugar-sweetened beverages contributes to public health and to government revenues. However, full integration of economic interests with public health might be challenging since Fiji is a country with a transitional economy and economic growth is based on consumption (Snowdon et al., 2010; Narsey et al., 2011; The World Bank, 2011; Wells, 2012b). To overcome this potential integration barrier, a health impact assessment may be used. Such an assessment could clarify that the long-term costs of obesity could overshadow economic wins (Snowdon et al., 2010). Furthermore, the sharing of resources between policy sectors within the Fijian government (i.e., a factor within the ball) may be increased if health policymakers strategically plan for agenda-setting, identify priorities and synergies in non-health sectors, and base proposals on existing legislative mechanisms where possible (Thow et al., 2011).

Moreover, intersectoral advocacy coalitions might be developed through *early* engagement with stakeholders *outside* the health sector (Thow et al., 2010b). Policymakers from the Ministry of Health and Medical Services can be trained to detect a window of opportunity and increase advocacy during cabinet and international meetings. Policy entrepreneurs and brokers such as the Ministry of Health and Medical Services' Wellness Centre, the World Health Organization, and C-POND can assist in generating policy alternatives. In combination with focusing events such as the United Nations High-Level Meeting of the General Assembly on Non-Communicable Diseases, a policy window might open (Kingdon, 2003; Craig et al., 2010; United Nations General Assembly, 2011). Furthermore, managers might assist policymakers in reframing health goals in the terminology of non-health policy sectors and stimulating awareness of public health in non-health policy sectors (Hendriks et al., 2013a). Additionally, efforts to integrate health with non-health sectors might become more sustainable if intersectoral governance structures are institutionalized by the Fijian government. A feasible first step to achieve this might be to establish a national Health in All Policies strategy, accompanied by a formal position to monitor and forecast the health impact of policy changes in non-health sectors.

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Secondly, if Fiji's food self-sufficiency and food security can be increased, Fijians might become less dependent on international multinationals or neighboring countries that supply food products that contribute to obesity. For example, in the context of liberalized trade, New Zealand exports high-fat mutton flaps and tobacco to PICs (Wyber et al., 2009). Although New Zealand also provides support for NCD prevention, these products make it very difficult for Fiji to prevent obesity. Policies that focus on local food production, improved agricultural production through promoting new technologies, crop diversification, capacity building activities, dissemination of information, and monitoring could therefore facilitate the development of obesity prevention policies (Sharma, 2006; Schulz, 2009; Snowden and Thow, 2013; Tamas, 2013). Countries with better economies can help Fiji in this regard by voluntarily limiting their export of health-damaging products (i.e., stop dumping) and assisting Fiji in strengthening local enterprises and farms, human resources, and technological development. Other countries should recognize that the comparative advantage of Fiji (and other PICs) on international markets is low; thus its remoteness, geography, and limited natural resources make it difficult to develop competitive export prices for their products (including food) (Khor, 2000; Curtis, 2004; Chen et al., 2014). Thow et al. (2011) therefore suggested that the health sector should be actively engaged in the negotiation of trade agreements to support healthier trade in the region. Negotiators should understand the implications of trade for all sectors of the economy and identify opportunities to improve the terms of negotiation for their countries.

Thirdly, Fiji's obesity prevention policy landscape might become more conducive to change by illuminating the 'obesity framing contest.' Some interviewees adopted the frame from the food industry but were not aware that such framing decreased the food industries' responsibility in obesity prevention. These interviewees emphasized education as the key solution to obesity, while the actual causes of rapidly increasing obesity rates seem to be primarily related to the changing food supply. Therefore, making the interests of the frame's sponsors transparent might help in reducing the hampering effects of obesity framing (Jenkin et al., 2011). At the same time, however, policymakers should recognize that Fijians (and also most other Pacific Islanders) traditionally perceive a large body size as desirable and an indicator of not only wealth, but also of being cared for and respected (Becker, 1995; Mavoa and McCabe, 2008). Moreover, culturally determined timeframes might influence the extent to which Fijians look into the future; preventing obesity might be less successful if it requires activities that could be instrumental in future outcomes while 'typical Fijian' timeframes are shorter (McInerney, 2004; Phan, 2009). This makes it important for policymakers to understand how sociocultural factors influence eating, activity, and body size (McCabe et al., 2011). The Translational Research for Obesity Prevention in Communities (TROPIC) project is already active in turning knowledge about the sociocultural factors of obesity (found in C-POND) into obesity prevention policies (Mavoa et al., 2012). Supporting the work of such researchers therefore remains important.

Fourthly, the lack of evidence about the efficacy of policies for Fiji's relatively young population hampers the development of obesity prevention policy. Evidence could legitimize policies, especially when they fit with national norms, values, practicability, feasibility, and affordability without excluding certain groups (i.e., evidence-informed policy) (Waqa et al., 2013). Although the TROPIC project (Mavoa et al., 2012) has greatly increased the evidence and legitimation, this is still scarce (Mendis, 2010).

### **Strengths and limitations**

A strength of this study is that we were able to conduct face-to-face interviews with representatives from a wide range of ministries, resulting in heterogeneous and in-depth data. Therefore, our data offers a broad view of the policy landscape. A limitation is that the data was cross-sectional and the interviews were not triangulated with focus groups or questionnaires. Moreover, we only interviewed one to four interviewees per ministry and we could not interview any representatives from some relevant ministries during the research period. Further, even though we assured interviewees that data would be anonymized, they might have felt pressure to give socially desirable answers (i.e., they knew the interviewers were working at the Ministry of Health and Medical Services). Finally, it remains challenging to generalize results from Fiji to countries that are not PICs because of their specific characteristics.

### **Conclusion**

Fijian policymakers clearly invest in obesity prevention policies, but their efforts are often hampered by the policy landscape. Policy entrepreneurs and brokers, researchers, and international actors such as the food industry, the WTO, and countries with better economies in general can support the Fijian government in reducing power inequalities and increasing food self-sufficiency. Establishing a national Health in All Policies strategy and intersectoral governance structures may be a suitable first step towards achieving this goal.

# Chapter 8

*One more question to guide the development and implementation of health in all policies : integrate?*

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## Letter to the editor

In this letter, we would like to respond to a recent paper that was published in this journal by De Leeuw and Peters (2014). In their contribution, the authors recommend to use the political and policy literature more productively to explain the development of Health in All Policies (HiAP). For the HiAP context, they regard the application of behavioral constructs to explain political phenomena (such as HiAP) as a scholarly sin, stating that the behavioral perspective is '*asking the wrong question, and deploying an inappropriate inquiry system*'. In a similar context, however, we (Hendriks et al., 2013b) intentionally use a behavioral science perspective, because, in our view, each HiAP development initially requires an organizational behavior change on the part of certain policy actors. We agree with De Leeuw and Peters (2014) that HiAP barriers are often intrinsically political in nature, but also see that many HiAP barriers are related to behavior change. We therefore propose a better integration of political science with behavioral science, to obtain a more comprehensive approach on HiAP. Therefore, we will first briefly outline how both author teams have operationalized their scientific perspective.

To assist HiAP developers, De Leeuw and Peters (2014) developed a HiAP checklist from a political and policy science perspective. This checklist incorporates nine core questions related to the following HiAP themes: (i) defining or redefining the problem, (ii) evaluating existing policy, (iii) gathering information, (iv) establishing the policy logic based on social determinants, (v) developing alternatives with stakeholders, (vi) trading off costs and benefits, (vii) constructing a matrix of power, interest and priority, (viii) considering political strategy, and (ix) describing and planning implementation. These themes are incorporated in 'core questions' that are meant to be answered by HiAP developers and '*show the practicalities of applying a health political science view to integral policy making*'. The authors argue that answering these core questions can guide the formulation, negotiation, development and implementation of HiAP, because this leads to a more thorough understanding of the complexity of HiAP development (De Leeuw and Peters, 2014).

For the same purpose, we (Hendriks et al., 2013b) developed the Behavior Change Ball (BCB) as a broad conceptual HiAP framework. The framework incorporates theoretical concepts from behavioral, organizational, political and policy science. It distinguishes 10 organizational behaviors (OBs) that are deemed relevant for the development of HiAP, as well as determinants of these OBs, and interventions and policies to address barriers or facilitators for each OB. These concepts are integrated in a behavioral change framework that is based on an extensive review of frameworks from a wide variety of disciplines such as psychology, law, cultural change, behavior change, implementation science, communication and marketing, and organizational change (Michie et al., 2011; Hendriks et al., 2013b). Behavior in this perspective should be interpreted in a broad sense. Within the BCB, the term behavior is used for behavior of different actors: individuals, groups, organizations and governments.



## One more question to guide the development

Looking at both the HiAP checklist and the BCB, we identify some striking similarities and conclude that the perspectives of both author teams actually complement each other. With regard to similarities, in both cases a ball's dynamics reflect how HiAP developers (i.e., jugglers) or actors in the BCB can work toward their 'goal', facing the reality of the policy process in which many things interact and happen at the same time, and which often seems chaotic even though order is present. Furthermore, both the De Leeuw and Peters (2014) and Hendriks et al. (2013b) indicate that factors beyond the HiAP developers' direct control will interact with the policymakers' behavior. At the same time, both recognize that fully understanding these factors is very difficult, because they are grounded in 'social, political or commercial health determinants' that government bureaucracies can hardly address. Third, both author teams describe that innovation is difficult for governments and that 'cross-sectoral' (De Leeuw and Peters, 2014) or 'intersectoral' collaboration (Hendriks et al., 2013a,b) between different 'silos' or 'sectors' is necessary to address policy issues that are complex, 'cynefin' (Snowden, 2005), messy, fuzzy (De Leeuw and Peters, 2014) or wicked (Hendriks et al., 2013b, 2014). Both argue that approaches to such problems should be seen as 'learning exercises' and should be based on 'flexible' (De Leeuw and Peters, 2014) or 'adaptive' management approaches (Hendriks et al., 2013b).

When focusing on complementary perspectives, it seems that De Leeuw and Peters (2014) focus more on forces within the policy context outside the governmental organization and ask more questions regarding stakeholders that are indirectly (i.e., outside the government) involved in HiAP developments, while we (Hendriks et al., 2013b) focus more explicitly on forces within the governmental organization and ask more questions regarding stakeholders that are directly involved with developing HiAP (i.e., governmental actors at strategic, tactical and operational levels).

We recognize forces outside the governmental organization by positioning the BCB in an attractor landscape, but do not directly describe concepts that govern this landscape. Integrating De Leeuw and Peters' nine core questions into the BCB's landscape seems to provide additional and useful content for the BCB's environment. This seems especially appealing since the most optimal HiAP perspective probably depends on the specific 'HiAP issue' at hand. In other words, not one but both perspectives might be useful to attain the goal of both author teams: 'to achieve a more thorough understanding of the complexity of HiAP'. For example, the development of HiAP in Fiji seems to be hampered by World Trade Organization agreements limiting the Fijian government in restricting the imports of unhealthy foods (Thow et al., 2010a). Since this issue is more political in nature, De Leeuw and Peters' angle seems more appropriate to grasp why the development of HiAP might be stagnating. On the other hand, in one of our cases (i.e., a Dutch municipal organization described in chapter 5), policymakers resisted changes to their working routines and did not have the skills to collaborate across sectors, hampering the development of HiAP. In view of the organizational nature of this HiAP barrier, our behavioral approach (i.e., examining OBs) seems to be most appropriate. Finally, it might also be useful to combine both perspectives in

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working toward interventions to promote effective HiAP. For example, understanding a HiAP issue might be described from De Leeuw and Peters' political and policy perspective, while 'solutions' might be found in using the BCB's behavioral change perspective.

To conclude, we feel that future attempts to explain HiAP development should integrate political and behavioral science perspectives better and thereby apply a more comprehensive approach to understand HiAP. Instead of emphasizing one's own perspective, we advocate that experts in HiAP should put effort in integrative, holistic, systems perspectives. Viewing different scientific angles as additives rather than competitors may lead to new insights that take HiAP developments a step further.

# *Chapter 9*

## *General discussion*



## General discussion

The goal of the research project reported on in this dissertation was to define characteristics of integrated public health policies, develop a conceptual framework to study and guide the development of integrated public health policies, and gain insight into facilitators and barriers for the development of integrated public health policies.

To this end, we developed two defining characteristics as operational criteria for integrated public health policies: (1) the combination of policies includes an appropriate mix of interventions that optimizes the functioning of the behavioral system, thus ensuring that motivation, capability, and opportunity interact in such a way that they promote the preferred (health-promoting) behavior of the target population, and (2) the policies are implemented by the relevant policy sectors from different policy domains (i.e., intersectoral collaboration).

We also developed a conceptual framework, called ‘The Behavior Change Ball’ (BCB), to study and guide the development of integrated public health policies. We chose to develop this comprehensive framework because we found that a wide range of theories from several disciplines (e.g., behavioral, policy, political, organizational, and implementation science) could be used to explain the development of integrated public health policies, but that a framework that combined these theories was lacking. As a result it was hard to interpret research findings in a comprehensive way and ‘see the big picture’. To develop the BCB, we integrated existing theories within a behavioral science framework, and used a narrative literature review of existing theories, as well as interviews with stakeholders of integrated public health policies, to select ten organizational behaviors (OBs) divided over policymakers at the strategic, tactical, and operational levels. These OBs were: agenda-setting, leadership and policy formulation at the strategic level; adaptive management and leadership at the tactical level; and network formation, innovation, teamwork, policy formulation, and implementation at the operational level. By integrating these OBs within the Behavior Change Wheel framework proposed by Michie et al. (2011), we were able to link each of these Behaviors to Capability-Opportunity-Motivation (i.e., the COM-B system), and to interventions and policy categories. To illustrate the contextual policy dynamics of achieving sustained implementation of integrated public health policies, we used the metaphor of a ball in a mountainous landscape and proposed to integrate concepts from policy and political science perspectives within this landscape.

We then empirically applied our BCB framework to four cases, in which we explored barriers and facilitators for the development of integrated public health policies, both *within* the governmental organization and *outside* it (i.e., in the policy landscape), and interventions that could stimulate the development of integrated public health policies.

These cases helped us to find answers to our research question: *‘What are defining characteristics of integrated public health policies, how can we study and guide the development of integrated public health policies, and what facilitates or hampers the development of integrated public health policies?’*

The next sections reflect on two aspects of this question, the conceptual framework and the facilitators and barriers. The subsequent sections discuss strengths and limitations of our dissertation work and provide recommendations for future studies.

### **Reflections on the conceptual framework**

We proposed a conceptual framework - the BCB - to study and guide the development of integrated public health policies. Although several previous studies have described a mix of theoretical frameworks, a *comprehensive* framework that could provide an overview of existing theories and that integrated them was lacking. Therefore, the goal of our framework was to create integration and see if this could offer a new perspective that would be helpful in understanding the development of integrated obesity prevention policy. The BCB offers the flexibility to select and switch between relevant theories, which we consider essential when studying the wicked policy process. Indeed, the policy process is unique in each situation, and data collection and analysis is unpredictable (Rittel and Webber, 1973). Without a ‘tool’ that allows this flexibility – which we created by structured integration of theories in the framework of the BCB – the researcher would be inclined to address the wicked process of developing integrated policies as if it were a tame process, i.e., using a standard theory to analyze a wicked problem rather than selecting a combination of theories that ‘fit’ the data about which understanding may evolve during the research process. In other words, fully understanding the wicked policy process requires a ‘whole-systems’ approach of looking at the policy process. The BCB is especially useful in that most policy theories tend to explain only *parts* of the policy process. For example, Kingdon’s agenda-setting theory (Kingdon, 2003) can help in understanding the first part of the policy process (i.e., the agenda-setting), but does not help to explain policy formulation by policymakers after the problem has been put on the agenda. In view of this single focus of existing political and policy theories, researchers need to select different theories that are not suitably connected, in an attempt to grasp the bigger picture. For example, Peters et al. (2014) used the variables of ‘initiator and actors’ from the policy network literature (Kickert et al., 1997), while deriving the variables of ‘policy goals and policy instruments’ from public policy literature (Van de Graaf and Hoppe, 1996), and the determinants to address health-related behaviors from socio-ecological literature (Dahlgren and Whitehead, 1991).

Although we agree that these theories are excellent when it comes to framing political and policy variables, and that a literature with so many useful theories does not need more theories, we did feel there was a need for a framework to create a more *comprehensive* overview of theories that can be used to explain the development of integrated public health policies (Matland et al., 1995). We

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therefore tried to develop a framework that could help in framing the development of integrated public health policies from multiple theoretical perspectives, thereby reducing the inclination to think from just one viewpoint and potentially bias what we see (i.e., theoretical bias).

Our case studies using the BCB framework confirmed that we were able to develop a comprehensive perspective, be more open to unexpected findings, apply several theories in a flexible way, show the relative value of different theories in the case being studied, and select a perspective that offers the most useful explanations or combine perspectives. We considered this important since the optimal approach probably depends on the specific 'integrated policy issue' at hand. For example, the development of integrated policy in Fiji seems to be hampered by World Trade Organization agreements limiting the Fijian government in restricting the imports of unhealthy foods (chapter 7). Since this issue seems more political in nature, an analysis that starts with the policy landscape using the perspective of the Attractor Landscape that originated from dynamics systems theory (Thelen and Smith, 2006) seemed most appropriate. On the other hand, in one of our cases (chapter 5), policymakers resisted changes to their working routines and did not have the skills to collaborate across sectors. In view of the organizational nature of this barrier, an approach starting from factors *within* the BCB ball, such as 'teamwork', seemed to be most appropriate. It is also possible to use combinations: the development of integrated public health policies can first be interpreted from the landscape (i.e., political and policy) perspective, after which solutions might be found by using the BCB's behavioral change perspective.

### **Reflections on perceived facilitators and barriers**

In our studies we found a wide range of perceived barriers and facilitators for the development of integrated public health policies. Although we acknowledge that it is important to be cautious with generalizations about these factors, we can (on a more abstract level) reflect on common themes that appeared across all our cases.

In all our cases the intention to develop integrated public health policies was formulated on paper (e.g., in a public health policy document), and operational-level policymakers reported that the political support to develop such policies was sufficient. Thus, overt political support as operationalized in strategic level agenda-setting, leadership and policy formulation *seemed* present. However, at the tactical and operational level, this strategic-level support was not translated into improved organizational behaviors; tactical- and operational-level *leadership and stewardship* in the health sector proved to be poor, there was a lack of *broadly shared goals* in government (i.e., sometimes goals did overlap but this was not perceived as such by policymakers from health and non-health sectors), the *communication* between policymakers from health and non-health sectors was insufficient (e.g., due to stereotyping and cultural differences), and the *organizational structures* in most governments were reported to increase divergence rather than convergence. These factors led to poor outcomes of collaborative efforts; it proved to be difficult to keep all collaborative partners from health and non-health sectors engaged during the policy process (i.e., ISC)

and converge work processes and resources to develop ‘integrated’ obesity prevention policy.

In addition to barriers within the governmental organization, the policy landscape (outside the governmental organization) also yielded barriers and facilitators for the development of integrated policy. When higher levels of government (e.g., national or international) limit what policy sectors can decide to invest in, there were limited opportunities for some non-health sectors to take health considerations into account when developing policy. This limited *policy free space* in some sectors (especially sectors in the ‘hard’ domain) was often mentioned as hampering the development of policy that takes health considerations into account. In addition, the need for *community support* could also hamper policy changes; there need to be positive *social forces* in the community to develop policies that take health considerations into account. Without community support, it was highly unlikely that such changes would appear on the governmental agenda and be translated into actual policy changes (Huang et al., 2015).

All these themes gave us a comprehensive understanding of the development of integrated public health policies, and imply that interventions stimulating the development of integrated policy should target factors both within *and* outside the governmental organization.

### **Strengths and limitations**

A strength of the work reported on in this dissertation is that we developed a conceptual framework to define and theorize how ‘integrated’ a set of policies is, and to study and guide their development. Defining and theorizing add value because they allow data to be interpreted in a similar way across cases. Our operational criteria can, for example, be used in a document analysis of the current public health documents and by public health consultants to support public health policymakers in setting clear goals, while the BCB can be used to study organizational behaviors relevant to the development of integrated policy by policymakers within government.

Proposing operational criteria was considered particularly important because such concepts were lacking. For example, Tromp and Baltussen (2012) mapped 31 criteria for priority setting for health interventions as an aid to decision makers, but none of these criteria reflects the value of ‘integration’. Moreover, our criteria offer a relatively straightforward way of assessing and working towards more integration. This view seems to be supported by the current guidebook of the Dutch Council for the Environment and Infrastructure (Raad voor de Leefomgeving en Infrastructuur, 2014) as they use exactly the same criteria for integrated policy making as we did (though in a different field). Moreover, our current experiences with having our operational criteria applied by university students who are learning to develop integrated public health policy also indicate that the criteria are easy to use.



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A limitation might be that some might argue the operational criteria are too 'technocratic'; in practice, the rational reality of policymaking is unlikely to dominate over the policy reality (Plochg et al., 2013). Although we acknowledge this, we do not regard this as a convincing reason for not proposing rational criteria. Instead, we argue that health promoters and public health workers should become more skilled so as to persuasively diffuse the rational reality. Therefore, this limitation might become a strength if it is accompanied by more training for health promotion and public health practitioners.

Another strength of our BCB framework is that it provides a way to categorize and study organizational behaviors of policymakers *within* government. Although we acknowledge the strengths of previous frameworks, such as the policy triangle by Walt and Gilson (1991) which looks at the context, processes, and actors, we consider the BCB's behavioral perspective as a strength because we are (to our knowledge) the first to provide an approach that maps barriers and facilitators for the development of integrated public health policies as a behavior within governmental organizations; this might offer an additional starting point for action (in addition to studying the context or process).

Another strength of the BCB is that it is more specific than most other policy models. Compared to most other policy models that aim to explain general policy changes, such as Sabatier's Advocacy Coalition Theory (Sabatier, 1988), the BCB explicitly distinguishes determinants of change toward *integrated* public health policies. We achieved this by basing the development of the BCB on an inductive analysis (by using open questioning) of the current situation regarding integrated public health policies. As a result, the BCB sensitizes researchers (or others interested in integrated policy) more effectively to organizational behaviors that are relevant to the development of integrated public health policies.

Another strength of the BCB is that we were able to apply a new perspective to matters that have been studied by other perspectives for decades. Since our team of researchers was primarily working within the context of a health promotion department (rather than a political or policy department), we were challenged to explore how a behavioral science perspective and dynamics systems theory could be used in combination with policy and political theories. As a result, the BCB provides a relatively new perspective in the field of policy research and is expected to stimulate cross-fertilization. For example, the BCB probes researchers to explore the interaction between the factors of agenda-setting, from political theory, and teamwork, from organizational behavior theory, or to increase our understanding of the relation between political dynamics and organizational dynamics as represented by the landscape surrounding the BCB ball. Some might argue that the BCB's behavioral perspective is reductionist because the political context is not fully outlined. We acknowledge that our training in behavioral sciences might have limited our sensitivity to political dynamics in the study. Even though we attempted to prevent this by placing our 'ball' in a landscape, the landscape factors were not specified. The proposed integration of policy and political science perspectives within the BCB's landscape (in chapter 8) may be a

first step towards a specification of political dynamics from a behavioral science perspective.

Finally, a general limitation of both our operational criteria and the BCB is that they have not yet been applied in multiple longitudinal case studies. Although we applied parts of the BCB (i.e., the COM-B of intersectoral teamwork) in two cases, applied the BCB's structure to describe the policy landscape in which Fijian policymakers work, and are currently working on applying the BCB in four cases, we acknowledge that increasing the generalizability of our conceptual framework, drawing definitive conclusions about its practical usefulness, and showing its relative advantages over other frameworks will require application in small and large municipalities and at the local and national level of government over a longer period of time.

With regard to the strengths and limitation of our method, we see the use of interviews as the most appropriate way to collect in-depth data regarding policymakers' perspectives. An advantage of using individual interviews is that interviewees can give meaning to their behavior. This allows a better understanding of differences in organizational behaviors leading to the development of integrated public health policy making behaviors (e.g., intersectoral teamwork). We consider this a strength since our research project was one of the first to afford a broad view of the facilitators and barriers as perceived by policymakers *themselves*. So, even though quantitative differences in policymaking behavior might also be interesting, we would not have been able to explain the policymakers' behaviors if we had relied on quantitative methods only.

We might have strengthened our method by using individual interviews in combination with group interviews such as focus groups, brainstorming, nominal and Delphi groups, natural and formal field interviews, and observation techniques. Since group dynamics may play an important role in integrated policymaking, and group interviews may be used to validate individual interview data, this might be considered a limitation of our current method. However, to conduct group interviews, researchers need to be sensitive to group processes, and focus groups in particular might increase the pressure to conform. Therefore, individual interviews seemed to be the most appropriate method to explore the current research question. However, a dialogue or group session might have yielded additional information that could help to find an approach to solve perceived barriers.

Other limitations are that interviews from chapter 4 and 5 were held within small municipalities and the case from chapter 4 was also used in chapter 5. Moreover, most interviews were held in the beginning of the policy cycle and with actors at the operational level (i.e., among policymakers from health and non-health sectors). These aspects might have influenced the representativeness of our findings in several ways. Firstly, due to the trend of scaling up of local governments, it remains unclear how well our findings represent the future of Dutch local government. Our findings, for example, do not represent the

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differences between very small municipalities and medium sized or larger municipalities and the requirements each policy stage imposes. Secondly, perspectives of operational level policymakers were better represented compared to those of strategic and tactical level. We chose to focus on operational level actors because they were actually involved in formulating the integrated policy and because during the interviews, few operational level actors spontaneously mentioned the role of their aldermen (the heads of municipal health executives) or department managers. If they mentioned strategic and tactical levels, this often showed that those higher-level actors had other priorities than achieving integration. In discussions with operational-level actors, we frequently noticed a certain 'undertone' suggesting that their managers were not interested in integrated public health policies, as they feared loss of power as a result of investing in intersectoral collaboration. Additionally, some policymakers mentioned that the current economic crisis and reorganizations were the main reason for investing in integrated public health policies. In other words, it seemed operational policymakers were cautious about the 'real' intrinsic motivation of their aldermen and managers for integrated public health policies (i.e., they considered it 'lip service'). Since we were greatly interested in exploring this aspect in more depth, we approached several managers and aldermen. However, it proved to be difficult to interview them – and even more so on a regular basis. Formal reasons mentioned for this (by their secretaries) were the limited time available, but reasons mentioned informally included other motives (i.e., fear of losing power, saving resources). We consider the fact that we were not able to involve them sufficiently to be a limitation of our recruitment strategy; we only invited them by email, which works for operational level actors, but not for busy aldermen and managers. When we were able to interview strategic- and tactical-level leaders, we noticed that the interactions with them were less open, and it seemed difficult to collect data that was not 'politically correct'. These limitations might possibly be overcome by using other research methods, such as observations. We could, for example, have tried to obtain a work position in the health sector within government, so we could have observed what aldermen or managers actually do or say, rather than what they say they do.

### Recommendations

First of all, we recommend that researchers and health promotion professionals apply our operational criteria and the BCB framework to assist policymakers in the development of integrated policy, and to monitor and evaluate the progress of these policies. Our operational criteria can be used in a document analysis to evaluate the status quo, and in collaborative efforts in which researchers, together with health practitioners and policymakers, set goals to guide the development of integrated policy. The concepts included in the BCB can be used to prepare for data collection, categorize data, develop probes or sensitizing concepts, and analyze data by using the concepts as predefined codes in a coding scheme.

We further recommend applying the BCB in multiple longitudinal case studies using more comprehensive data collection methods. Observations, focus groups and more action-oriented research methods are recommended in addition to interviews. And besides operational level data, we would recommend collecting more data at the strategic and tactical levels, and among actors in the policy landscape. Hence, we recommend that researchers prepare strategies to engage actors at the strategic and tactical levels more effectively. This could result in a more complete view of the policymaking process, and increase data triangulation.

Researchers may reflect on their data and determine if these data represent a new category or a subcategory of an existing code, thus helping to refine the BCB. Network formation may, for example, be seen as the first stage of teamwork and therefore be included as a subcategory of teamwork rather than as a separate OB. To further improve the BCB, we recommend that researchers integrate the HiAP checklist (De Leeuw and Peters, 2014) with the BCB (Hendriks et al., 2013b), thus operationalizing political dynamics as represented by the mountainous policy landscape. This would improve the BCB, as it would enable not only *organizational* dynamics, as outlined within the ball, but also *political* dynamics to be taken into account, resulting in a more comprehensive view of integrated public health policy development.

Furthermore, to operationalize the relationship between the policy landscape and the ball, we recommend exploring the role of other governmental levels (e.g., international, national, regional, and local levels) and stakeholders outside the government (e.g., the food industry or the community) in terms of their capability, opportunity, and motivation to develop integrated policy. Since the policy landscape is becoming increasingly important (UN Chronicle, 2015), understanding the interaction with and effects on policymakers responsible for integrated obesity prevention policy is expected to become even more relevant.

Moreover, as the public health sector is expected to be the 'prime mover' for integrated policies (Travis et al., 2002), this means they should learn how to collaborate and negotiate with actors in this policy landscape, i.e., other governmental levels and actors with positions of power, such as the World Trade Organization (Thow and Snowdon, 2014), multinational companies (e.g., Coca Cola), the food industry (e.g., Nestlé), politicians (e.g., Paul Rosenmüller), and

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celebrities (e.g., Jamie Oliver). The North Karelia Project in Finland and the Youth on a Healthy Weight (JOGG) movement in the Netherlands are two successful examples of this. In both cases, the health sector collaborated with the national government, industries, and the community to implement several obesity-related interventions and policies (Jongeren op Gezond Gewicht, 2010; Baril, 2013).

To stimulate the health sector taking on this role, we recommend that governments recruit policymakers that have the capabilities to work in more open-ended, collaborative, and adaptive situations or focus on the development of such skills in existing policymakers (Head and Alford, 2013). Although the health sector often spearheads intersectoral actions, to achieve more policy integration, the sector needs to become more *'outward-oriented, open to others and equipped with the necessary knowledge, skills and mandate to take a systems approach to health'* (Kickbusch and Gleicher, 2012 p. 84; Peters et al., 2014).

Additionally, it is the role of the public health policymakers or health professionals that support these policymakers (e.g., in the JOGG movement) to create awareness of the linkage between health and non-health sectors, and act as *agenda setters* and *brokers* for health (Kickbusch, 2010; Kingdon, 2003). Managers (tactical level) and the heads of the municipal government departments (strategic level) should also become aware of *their role* within this. They should guide the processes that can lead to more integrated policy, for example, by stimulating *broad* goal setting (across policy sectors rather than within one sector) and ensure *frequent* communication between policy sectors.

Furthermore, we recommend that managers and city managers establish enabling conditions that allow provisional solutions to be discussed and decided (Head et al., 2013; Tang et al., 2014). This requires more 'adaptive leadership' within government. Instead of the traditional notion of top-down governance, leading officials in local governmental (municipal secretaries, aldermen, department managers) should mobilize knowledge that goes beyond that of a leader acting alone. Thus, leaders can improve the opportunities for operational-level policymakers to adapt to the new requirements of integrated public health policies (Head and Alford, 2013).

We recommend that these strategic and tactical level actors establish structures and processes of governance that do not constrain broad thinking, collaboration, and leadership (Head and Alford, 2013), and approach the development of integrated policy as an emergent process that requires adaptive governance (Brunner, 2010). Structures and processes should enable stakeholders to negotiate shared understanding and meaning with regard to the obesity problem and its possible solutions (i.e., policy alternatives). As Conklin states: *'The objective of the work is coherent action, not final solution'* (2006. p. 5). Actors at the strategic and tactical levels should let their decisions be informed by policymakers at the operational level (i.e., from the bottom up). Policymakers can incrementally explore what works and how this can be improved in the context at hand, and disseminate insights derived from such emergent processes for voluntary

adaptation among other governments (Brunner, 2010). The established pattern of governance has a performance measurement system that is primarily focused on *end* results, while *process* outcomes are more important in developing approaches to wicked problems. Creating collaborative adaptive structures is expected to facilitate the development of integrated policy in a sustainable way, as the government system will be better matched to the requirements of integrated policy. This implies that fewer coincidental changes are required, and adoption of integrated public health policies will also become more likely in the upcoming policy cycles (Gustafson, 2003).

In addition to these recommendations for actors within government, it is important for those who are assisting or supporting governments (e.g., researchers, supporting institutions such as Public Health Services, the staff of the JOGG program, National Health Services) to improve their role as 'knowledge brokers' and compile knowledge regarding integrated public health policy in a format that is useful for policymakers (e.g., using narratives or short policy briefs). Policymakers need *coherent* directions on which they feel they can deliver (Kirk et al., 2013). A 'policy cacophony' of noise drowning out effort should be prevented (Lang and Rayner, 2007; Shelley, 2012). Therefore, scientific results should not only be translated to increase awareness of the links between public health and non-health sectors among governmental actors, but also to tell them *how* such knowledge can be translated into 'integrated' policy measures. In doing so, attention should be paid to the development of 'realistic' integrated policy options for governments, taking into account the policy free space of each policy sector and enabling or restricting policies at other levels of government (Allender, 2011). This implies that researchers should learn new skills regarding the most effective way to communicate their messages on childhood obesity prevention to policymakers, or in dialogue with them (see, e.g., the policy briefs of the Dutch Scientific Council for Government Policy, 2014). Universities can facilitate researchers in this regard by offering them special courses on knowledge coproduction, i.e., using a knowledge-brokering approach (Brownson et al., 2009; Mavoa et al., 2012; Waqa et al., 2013). Moreover, since knowledge transfer and production is a multidirectional process, merely offering a course will not be sufficient to improve researchers' capabilities. Researchers should keep up a continuous dialogue with policymakers, emphasizing the reciprocal relationship (Notwotny, 2003).

Moreover, policymakers need to be provided with tools to assist in the monitoring and evaluation of processes and effects of integrated policy. This could encourage learning and provide them with knowledge about ways to improve the development and implementation of an integrated approach (O'Connor-Fleming et al., 2006); i.e., governments can learn from 'best practices', in terms of content and process, required for integrated public health policies. A wide variety of such evaluation tools has been developed by our research team 'Consortium Integrated Approach Overweight' (CIAO) and can be disseminated among governments (JOGG, 2010; Koperen et al. 2014).

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Furthermore, evaluation may also increase people's motivation to develop integrated policy. Evaluation can *reveal* which governments are and which are not developing integrated public health policies (i.e., benchmarking). If investments in integrated policy yield *visible* successes, this produces incentives for political leaders and modeling for other governments (Martin et al., 2014). The team consisting of the Dutch CIAO consortium and the Youth on a Healthy Weight (JOGG) staff are already involved in this.

A challenge might be that governments might not want to participate in such evaluation or guidance, since governments might risk being 'exposed' (i.e., in that it might become clear how little integration there is) and it might reveal the lack of evaluation capacity (Kegeles et al., 2005; Mayberry et al., 2008). Therefore, an overall recommendation is that support for governments should be more proactive and long-term. A good example of such support is the work of Youth on a Healthy Weight (JOGG) staff, who pro-actively assign 'coaches' to those responsible for the implementation of an integrated approach to obesity prevention. A limitation of such support is that it requires substantial resource investments (both in time and funding). Since previous studies (Steenbakkens, 2012) indicate it is very hard to create sustainable ways of capacity building and resource investments within government, we recommend a climate of lifelong learning and earmarked budgets.



## Conclusion

Just as childhood obesity is a ‘wicked’ problem and a normal response to our obesogenic environment, so are fragmented policy approaches a normal response to the governmental environment (Hunter, 2009). Policymakers at the operational level, who are responsible for the development of integrated public health policies, often lack the capability, opportunity, and motivation to develop integrated public health policies, because they are not supported by policy actors at the strategic and tactical levels or higher tiers of government (national, international) or institutions (Hunter, 2009). For many, the precise meaning of integrated public health policies remains vague, and prerequisites for their development are often not in place.

Solely focusing on motivation to develop such policies thus cannot be expected to yield better outcomes. However, previous attempts to stimulate the development of integrated policies have often been based on increasing capability and motivation, for instance by means of training courses and workshops. These efforts, however, ignored the complexity and interconnectedness of the factors that makes the development of integrated public health policies so ‘wicked’. In some ways, they even seem to have increased barriers to the development of integrated policy, as attempts have not resulted in the expected outcomes and raised skepticism about the feasibility of integrated public health policies.

Future attempts to stimulate the development of integrated policy should therefore be based on systems thinking. This calls for a public-health workforce that not only possesses knowledge about the manifestations of obesity and evidence-based approaches to tackle them (the what), but also has the skills to collaboratively govern and manage the policy processes (the how).

The research work reported on in dissertation has taken some initial steps to enable such broader thinking by integrating theories from a wide variety of disciplines within a comprehensive conceptual framework and by incorporating this framework in dynamics systems theory. In explicitly applying an interdisciplinary framework, we may have taken some steps to overcome the cliché: *‘To someone holding a hammer, everything looks like a nail.’* Moreover, approaches should be based on collaboration and cooperation, meaning that we should not only engage actors *within* the government who are supposed to develop the integrated policy, but also actors *outside* government, from health and non-health sectors, and citizens (Huang et al., 2015).

We recommend that future researchers focus on factors within the control of governmental organizations, such as leadership and stewardship at the tactical and operational levels in the health sector, the development of broadly shared goals in government, improving communication between policymakers from health and non-health sectors, and changing organizational structures to promote convergence rather than divergence of work processes. Simultaneously, forces in the landscape should be addressed, including the presence of policy free space as

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created by national and international governments and social forces in the community.

## Summary

The goal of the research project reported on in this dissertation was to *define characteristics* of integrated public health policies, develop a *conceptual framework* to study and guide their development, and gain insight into *facilitators and barriers* for their development. To achieve this goal, seven studies were conducted, whose nature and main findings are briefly summarized below.

After the introductory chapter 1, chapter 2 discusses our finding that there was a lack of clear criteria to operationalize integrated public health policies, making it difficult to evaluate health policy documents (i.e., conduct a document analysis) or guide policymakers in their pursuit of integrated public health policies. As a result, it was difficult to assess if integrated public health policies were present, or to determine which aspects of the health policy needed to be addressed to make them more integrated. Therefore, a literature review was conducted and two defining characteristics of integrated policies were selected: (1) the combination of policies includes an appropriate mix of interventions that optimizes the functioning of the behavioral system, thus ensuring that motivation, capability, and opportunity interact in such a way that they promote the preferred (health-promoting) behavior of the target population, and (2) the policies are implemented by the relevant policy sectors from different policy domains (i.e., intersectoral collaboration).

Furthermore, a conceptual framework, called the 'Behavior Change Ball' (BCB), was developed to study and explain the development of integrated public health policies (chapter 3). In developing the BCB, existing theories were integrated in a behavioral science framework (i.e., the Behavior Change Wheel), and a literature review of existing theories was used, as well as interviews with stakeholders of integrated public health policies, to select ten organizational behaviors (OBs) divided across policymakers at the strategic, tactical, and operational levels. These OBs included agenda-setting, leadership, and policy formulation at the strategic level; adaptive management and leadership at the tactical level; and network formation, innovation, teamwork, policy formulation, and implementation at the operational level. By integrating these OBs within the Behavior Change Wheel framework proposed by Michie et al. (2011), each of these Behaviors was linked to Capability-Opportunity-Motivation (i.e., the COM-B system), and to interventions and policy categories. Additionally, the metaphor of a ball in a mountainous landscape was used in our framework to illustrate the difficulty of achieving sustained implementation of integrated public health policies in a policy landscape.

Our third and fourth studies (chapters 4 and 5) examined the determinants of 'intersectoral collaboration'. The previous studies (chapters 2 and 3) had shown that intersectoral collaboration (ISC) is an important prerequisite for developing integrated public health policies. However, the implementation of ISC was often found to be hampered in practice. To understand why this was the case, we interviewed 19 policymakers from health and non-health policy sectors. These

interviews revealed several barriers and facilitators relating to capability, opportunity, and motivation for ISC. Capability for ISC was determined by awareness of the linkage between health and non-health policy sectors (which was limited) and the ability of different policy sectors to share policy goals (which was also limited). In situations where the management was involved in creating awareness of the linkage between health and non-health policy sectors, and where policymakers at the operational level had greater motivation to continue learning, these ISC capability-related barriers were more likely to be overcome. Opportunities for ISC were also reduced by a lack of organizational resources and structures. Flatter organizational structures and coaching of operational-level policymakers by managers were expected to improve opportunities for these policymakers. In addition, the motivation for ISC was low when health and non-health policy sectors did not share policy goals. Finally, the motivation to learn new ISC skills was low when the perceived feasibility of ISC and professional autonomy were low.

The study presented in chapter 6 explored interventions that could stimulate ISC and the development of integrated public health policies. Interviews with stakeholders in such integrated policies revealed nine intervention categories: education, persuasion, incentivization, coercion, training, restriction, environmental restructuring, modeling, and enablement. We concluded that the most effective approach to stimulate the development of integrated public health policies was to educate, persuade, and incentivize actors at the strategic level; to educate, train, and provide models for actors at the tactical level; and to train and enable actors at the operational level, and restructure their environment.

Finally, the seventh study (chapter 7) was conducted in Fiji (i.e., a Pacific Island country). In Fiji the obesity prevention policy landscape was assessed through interviews with policymakers from various ministries of the Fijian national government. Findings showed that the development of integrated public health policies was often hampered by Fiji's unfavorable economic situation, low food self-sufficiency, power inequalities, inappropriate framing of obesity, limited policy evidence, and limited resource sharing. Facilitators were policy entrepreneurs and policy brokers who were active when a window of opportunity emerged and who strengthened ISC. Reducing power inequalities between the government and international actors such as the World Trade Organization and the food industry could make Fiji's obesity prevention policy landscape more conducive to obesity policies. In Fiji, as well as in other Pacific Island Countries, this may be achievable through increasing food self-sufficiency, strengthening ISC, and appointing a government official with the specific task to monitor and forecast the health impact of policy changes in non-health sectors.

Chapter 8 discusses how future attempts to explain the development of integrated public health policies should combine political and behavioral science perspectives more effectively and thereby use a more comprehensive approach. We advocate that experts in integrated policy should invest effort in integrative, holistic, systems perspectives. Viewing different scientific angles as supplementing each

other, rather than competing with each other, may lead to new insights that take the development of integrated public health policy a step further.

Finally, chapter 9 summarizes the main findings, discusses the strengths and limitations of this research project, and presents recommendations for future studies and for practice. The dissertation ends with a valorization proposal.



## Samenvatting

### **‘Venijnige vraagstukken en uitdagende mogelijkheden: Ontwikkeling van integraal gezondheidsbeleid voor de preventie van obesitas’**

In de onderzoeken in dit proefschrift geef ik antwoord op de volgende vragen:

1. Wat zijn de karakteristieken van integraal gezondheidsbeleid?
2. Welk theoretisch kader kunnen we gebruiken om de ontwikkeling ervan te bestuderen en begeleiden?
3. Wat houdt de ontwikkeling van integraal gezondheidsbeleid tegen of faciliteert deze juist?
4. Wat kan gedaan worden om de integraliteit van gezondheidsbeleid te bevorderen?

In het eerste hoofdstuk introduceren wij de aanleiding van onze studies. Daarna worden er in zeven hoofdstukken zeven studies gepresenteerd. Tot slot worden in het laatste hoofdstuk de hoofdbevindingen samengevat, worden sterke punten en beperkingen van het onderzoek bediscussieerd, en worden er aanbevelingen gedaan voor toekomstige studies en de praktijk.

#### **Criteria ‘integraal’ gezondheidsbeleid**

In hoofdstuk 2 wordt ingegaan op de karakteristieken van integraal gezondheidsbeleid. Op basis van een literatuurstudie en een bestaand model, het zogeheten ‘Behavior Change Wheel’ van Michie en collega’s (2011), zijn twee criteria geselecteerd die het begrip ‘integraal gezondheidsbeleid’ onderscheiden van gerelateerde begrippen zoals ‘gezondheidsbeleid’.

De twee criteria die integraal gezondheidsbeleid kenmerken zijn:

1. Het beleid wordt gekenmerkt door interventies die het functioneren van het ‘gedragssysteem’ (bestaande uit motivatie, mogelijkheden en vaardigheden) optimaliseert in de richting van gezond gedrag.
2. Het beleid wordt uitgevoerd door zowel de gezondheidssector als de niet-gezondheidssectoren (bijvoorbeeld ruimtelijke ordening).

#### **Gedagsveranderingsbal**

In hoofdstuk 3 wordt een theoretisch kader ontwikkeld met de naam de ‘Gedagsveranderingsbal’. Met dit kader wordt het gedrag van gemeentelijke beleidsmakers, dat essentieel is voor de ontwikkeling van integraal gezondheidsbeleid, in kaart gebracht. Om relevante ‘organisatiegedragingen’ te identificeren is een literatuurstudie gedaan, en zijn interviews gehouden met wethouders, managers en ambtenaren binnen verschillende gemeenten en andere belanghebbenden bij integraal gezondheidsbeleid. Op basis van deze data is een selectie gemaakt van tien essentiële organisatiegedragingen die, indien in voldoende mate aanwezig, bijdragen aan de ontwikkeling van integraal gezondheidsbeleid.



De tien organisatiegedragingen die relevant zijn voor de ontwikkeling van integraal gezondheidsbeleid zijn:

1. Het agenderen van integraal gezondheidsbeleid;
2. Het vertonen van strategisch leiderschap voor dit beleid;
3. De ontwikkeling van een strategische visie voor dit beleid;
4. Het vertonen van adaptief management;
5. Het vertonen van management leiderschap;
6. Het vormen van netwerken met interne en externe partners;
7. Open staan voor innovatie;
8. Teamwerk om integraal gezondheidsbeleid te ontwikkelen;
9. Het beschrijven van het beleid in documenten;
10. Het implementeren van het beleid.

Door deze tien gedragingen te integreren in de Behavior Change Wheel is er een koppeling gemaakt tussen dit gedrag van beleidsmakers en de mogelijkheden om dit gedrag te bevorderen.

### **Barrières en faciliterende factoren voor intersectorale samenwerking**

In hoofdstuk 4 en 5 is in twee gemeenten onderzocht wat, volgens beleidsmakers, barrières of faciliterende factoren zijn voor samenwerking tussen verschillende beleidsafdelingen (gezondheid en niet-gezondheid). Deze intersectorale samenwerking is nodig voor de ontwikkeling van integraal gezondheidsbeleid. Uit interviews met beleidsmakers zijn de volgende barrières voor intersectorale samenwerking naar voren gekomen:

1. Beleidsdoelen van afdelingen verschillen en de overlap tussen deze beleidsdoelen wordt vaak niet herkend;
2. Managers zijn niet betrokken bij het creëren van bewustzijn van dergelijke overlap in beleidsdoelen en coachen ambtenaren niet op intersectorale samenwerking;
3. Ambtenaren zonder autonomie, binnen hiërarchische organisatiestructuren met onvoldoende financiële middelen, zijn vaak minder gemotiveerd om samen te werken omdat dat als onhaalbaar wordt gezien.

Deze barrières zijn te overbruggen door:

1. Het opstellen van gezamenlijke beleidsdoelen en bewustwording van de relatie tussen gezondheids- en niet-gezondheidssectoren;
2. Managers die beleidsmedewerkers coachen om samen te werken binnen 'plattere' organisatiestructuren;
3. Het vergroten van de motivatie om nieuwe samenwerkingsvaardigheden te leren door meer autonomie te geven aan beleidsmedewerkers en het haalbaarder maken van intersectorale samenwerking (bijvoorbeeld door financiële middelen hiervoor te reserveren).

### **Stimulerende interventies**

Hoofdstuk 6 gaat in op interventies om intersectorale samenwerking en de ontwikkeling van integraal gezondheidsbeleid te stimuleren. Interviews met belanghebbenden tonen aan dat intersectorale samenwerking en de ontwikkeling van integraal gezondheidsbeleid gestimuleerd kan worden door negen interventies: voorlichten, overtuigen, belonen, dwingen, trainen, herstructureren van de omgeving, voorbeelden geven en mogelijk maken. We concluderen dat de meest effectieve manier om integraal gezondheidsbeleid te stimuleren is om gemeentelijke actoren op:

1. Strategisch niveau (bijvoorbeeld wethouders en de gemeentesecretaris) voor te lichten, ze te overtuigen en te belonen om te investeren in integraal gezondheidsbeleid;
2. Tactisch niveau (bijvoorbeeld managers en afdelingshoofden) voor te lichten, ze te trainen en voorbeelden te geven over hoe ze de ontwikkeling van integraal gezondheidsbeleid kunnen stimuleren en faciliteren;
3. Operationeel niveau (bijvoorbeeld een ambtenaar publieke gezondheid of ruimtelijke ordening) te trainen, het voor hun haalbaar (kansrijk) te maken om integraal beleid te formuleren, en hun omgeving (bijvoorbeeld de organisatiestructuur) te herstructureren.

### **Fiji**

In hoofdstuk 7 is het beleidslandschap voor obesitaspreventie in de republiek Fiji, een eilandenstaat in de Zuid-Pacifische Oceaan, in kaart gebracht. Daarvoor zijn interviews gehouden met beleidsmakers van verschillende ministeries binnen de nationale overheid die mogelijk invloed zouden kunnen hebben op het ontstaan van overgewicht.

Uit deze interviews is gebleken dat de ontwikkeling van integraal gezondheidsbeleid wordt beïnvloed door:

1. Fiji's ongunstige economische situatie;
2. De beperkte eigen voedingszelfredzaamheid van Fiji;
3. Het inkaderen van obesitas als individueel probleem;
4. Machtsverschillen tussen de overheid en internationale actoren;
5. Beperkt wetenschappelijk bewijs voor preventieve obesitasbeleidsmaatregelen in de context van Fiji;
6. Het beperkt delen van middelen tussen de ministeries;
7. Beleidsmakelaars die actief worden wanneer zich een kans voordoet om integraal gezondheidsbeleid te formuleren en dan intersectorale samenwerking stimuleren.

Fiji's beleidslandschap voor obesitaspreventie kan zich voorspoediger ontwikkelen als de machtsverschillen en invloeden tussen de overheid en internationale actoren, zoals de Wereldhandelsorganisatie en de voedingsindustrie, worden gereduceerd ten voordele van Fiji. In Fiji, evenals op andere eilanden in de Pacific, kan dit bereikt worden door een toenemende voedingszelfredzaamheid, versterking van intersectorale samenwerking en het transparant en meetbaar

maken van het gezondheidseffect van beleidsveranderingen in de niet-gezondheidssectoren.

### **Naar het beter bestuderen van de ontwikkeling van integraal gezondheidsbeleid**

Hoofdstuk 8 is gewijd aan hoe de ontwikkeling van integraal gezondheidsbeleid beter kan worden bestudeerd. Dit kan door politieke en gedragswetenschappelijke perspectieven meer te combineren. We pleiten er dan ook voor, om voor het onderzoeken van integraal gezondheidsbeleid, vooral te investeren in geïntegreerde, 'holistische' systeemperspectieven. Wetenschappelijke invalshoeken die van elkaar verschillen kunnen elkaar aanvullen in plaats van met elkaar te concurreren. Het is te verwachten dat door integratie van politieke, beleids- en gedragswetenschappen, nieuwe inzichten ontstaan die de ontwikkeling van integraal gezondheidsbeleid een stap verder brengen.

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## Publications

d.d. 21-01-2016

### Publications presented in this dissertation

**Hendriks A-M**, Kremers SPJ, Jansen MWJ, Seidel JC, Vries de NK, Gubbels JS: Interventions to promote an integrated approach to public health problems: an application to childhood obesity. *Journal of Environmental and Public Health* 2012;2012(2012):1-14.

**Hendriks A-M**, Kremers SPJ, Gubbels JS, Raat H, Vries de NK, Jansen MWJ: Towards health in All policies for childhood obesity prevention. *Journal of Obesity* 2013;2013(2013):1-12.

**Hendriks A-M**, Jansen MWJ, Gubbels JS, Vries de NK, Paulussen T, Kremers SPJ: Proposing a theoretical framework for integrated health policy making with an application to childhood obesity - the Behavior Change Ball. *Implementation Science* 2013;8:46-62.

**Hendriks A-M**, Habraken J, Jansen MWJ, Gubbels JS, Vries de NK, Oers van HAM, Michie S, Atkins L, Kremers SPJ: 'Are we there yet?' - operationalizing the concept of integrated public health policies. *Health Policy* 2014;114(2):174-182.

**Hendriks A-M**, Jansen MWJ, Gubbels JS, Vries de NK, Molleman NK, Kremers SPJ: Local government officials' views on intersectoral collaboration within their organization- A qualitative exploration. *Health Policy and Technology* 2015;4(1):47-57.

**Hendriks A-M**, Delai MY, Thow A-M, Gubbels JS, Vries de NK, Kremers SPJ, Jansen MWJ: Perspectives of Fijian Policymakers on the Obesity Prevention Policy Landscape. *BioMed Research International* 2015, in press.

**Hendriks A-M**, Jansen MW, Gubbels JS, Vries de NK, Kremers SP: One more question to guide the development and implementation of health in all policies: integrate? *Health Promotion International* 2015:1-3.

## Other publications

**Hendriks A-M**, Gubbels JS, Jansen MWJ, Kremers SPJ: Health Beliefs regarding Dietary Behavior and Physical Activity of Surinamese Immigrants of Indian Descent in The Netherlands: A Qualitative Study. International Scholarly Research Network ISRN Obesity 2012;1-8.

Van Koperen TM, Van der Kleij MJJ, Renders CM, Crone MR, **Hendriks A-M**, Jansen MWJ, Van de Gaar VM, Raat JH, Ruiter ELM, Molleman GRM, Schuit AJ, Seidell JC: Design of CIAO, a research program to support the development of an integrated approach to prevent overweight and obesity in the Netherlands. BMC Obesity 2014;1:1-12.

Akande VO, **Hendriks A-M**, Ruiter RAC, Kremers SPJ: Determinants of dietary behavior and physical activity among Canadian Inuit: a systematic review. International Journal of Behavioral Nutrition and Physical Activity 2015;12:84-101.



## References

Aarts M-J, Jeurissen MPJ, Oers van HAM, Schuit AJ, Goor van de IAM: Multi-sector policy action to create activity-friendly environments for children: a multiple-case study. *Health Policy* 2011a;101(1):11-19.

Aarts M-J, Schuit AJ, Goor van de IAM, Oers van HAM: Feasibility of multi-sector policy measures that create activity-friendly environments for children: results of a Delphi study. *Implementation Science* 2011b;6:128-38.

Ajzen I: The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 1991;50(2):179-211.

Allender S, Gleeson E, Crammond B, Sacks G, Lawrence M, Peeters A, Loff B, Swinburn B: Moving beyond 'rates, roads and rubbish': how do local governments make choices about healthy public policy to prevent obesity? *Australia and New Zealand Health Policy* 2009a;6(20):1-8.

Allender S, Cavill N, Parker M, Foster C: Tell us something we don't already know or do! The response of planning and transport professionals to public health guidance on the built environment and physical activity. *Journal of Public Health Policy* 2009b;30(1):102-116.

Allender S, Gleeson E, Crammond B, Sacks G, Lawrence M, Peeters A, Loff B, Swinburn B: Policy change to create supportive environments for physical activity and healthy eating: which options are the most realistic for local government? *Health Promot International* 2011;27(2):1-14.

Alter C, Hage J: *Organizations working together: coordination in interorganizational networks*. Newbury Park: Sage; 1993.

Alwan A, Maclean DR, Riley LM, d'Espaignet ET, Mathers CD, Stevens GA, Bettcher D: Monitoring and surveillance of chronic non-communicable diseases: progress and capacity in high-burden countries. *Lancet* 2010;376(9755):1861-1868.

Amabile TM: How to kill creativity. *Harvard Business Review* 1998;76(2):77-89.

Analitis F, Velderman MK, Ravens-Sieberer U, Detmar S, Erhart M, Herdman M, Berra S, Alonso J, Rajmil L: Being bullied: Associated factors in children and adolescents 8 to 18 years old in 11 European countries. *Pediatrics* 2009;123(2):569-577.

Angell SY, Silver LD, Goldstein GP, Johnson CM, Deitcher DR, Frieden TR, Bassett MT: Cholesterol control beyond the clinic: New York City's trans fat restriction. *Annals of Internal Medicine* 2009;151:129-134.

Angell SY, Cobb LK, Curtis CJ, Konty KJ, Silver LD: Change in trans fatty acid content of fast-food purchases associated with New York City's restaurant regulation: a pre-post Study. *Annals of Internal Medicine* 2012;157(2):81-86.

Anthony R: Planning and control systems: a framework for analysis. Cambridge: Harvard University Graduate School of Business Administration; 1965.

Atkinson S, Medeiros RLR, Oliveira PH, De Almeida RD: Going down to the local: incorporating social organisation and political culture into assessments of decentralised health care. *Social Science & Medicine* 2000;51(4):619-636.

Atkins L, Michie S: Designing interventions to change eating behaviours. *Proceedings of the Nutrition Society* 2015;74(2):164-170.

Australian Government: Australia's public health infrastructure today. 1998. <http://www.health.vic.gov.au/archive/archive2014/nphp/publications/broch/sectn003.htm>. Accessed 16 June 2015.

Australian Government. Tackling wicked problems a public policy perspective. 2007. <http://www.enablingchange.com.au/wickedproblems.pdf>. Accessed 16 June 2015.

Axelsson R, Axelsson SB: Integration and collaboration in public health - a conceptual framework. *The International Journal of Health Planning and Management* 2006;21(1):75-88.

Baal van PHM, Heijink R, Hoogenveen RT, Polder JJ: Zorgkosten van ongezond gedrag. Zorg voor euro's - 3, Rijksinstituut voor Volksgezondheid en Milieu. 2006. <http://www.rivm.nl/bibliotheek/rapporten/270751015.html>. Accessed 23 June 2015.

Bach S, Stroleny A: Social dialogue and the public services in the aftermath of the economic crisis: strengthening partnership in an era of austerity. *Industrial Relations and Social Dialogue* 2013:1-71.

Bacigalupe A, Esnaola S, Mart U, Zuazagoitia J: Learning lessons from past mistakes: how can health in All policies fulfill its promises? *Journal of Epidemiology & Community Health* 2010;64(6):504-505.

- Bakker AB, Demerouti E: The crossover of work engagement between working couples: a closer look at the role of empathy. *Journal of Managerial Psychology* 2009;24(3):220-236.
- Bandura A: *Social Learning Theory*. Englewood Cliffs: Prentice Hall; 1977.
- Baril G: The North Karelia Project in Finland: A societal shift favouring healthy lifestyles. 2013. <http://www.wphna.org/Oxford2014/wp-content/uploads/2014/09/NorthkareliaProjectFinland.pdf>. Accessed 23 June 2015.
- Barry CL, Brescoll VL, Gollust SE: Framing childhood obesity: how individualizing the problem affects public support for prevention. *Political Psychology* 2013(3);34:327-349.
- Barry VW, Baruth M, Beets MW, Durstine JL, Liu J, Blair SN: Fitness vs. fatness on all-cause mortality: a meta-analysis. *Progress in cardiovascular diseases* 2014;56(4):382-390.
- Batie SS: Wicked problems and applied economics. *American Journal of Agricultural Economics* 2008;90(5):1176-1191.
- Baumgartner FR, Jones BD: *Agendas and instability in American politics*. Chicago: University of Chicago Press; 1993.
- Beard E, Lorencatto F, Gardner B, Michie S, West R, Owen L, Shahab L: Identifying the behaviour change techniques used in cost-effective interventions targeting five health behaviours: smoking, diet, physical activity, alcohol, and sexual health, or multiple health behaviours. 2013 (in preparation).
- Becker AE: *Body, Self and Society: The View from Fiji*. Philadelphia: University of Pennsylvania Press; 1995.
- Becker AE, Burwell RA, Gilman SE, Herzog DB, Hamburg P: Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *The British Journal of Psychiatry* 2002;180(6):509-514.
- Becker A: Television, disorder eating, and young women in Fiji: negotiating body image and identity during rapid social change. *Culture, Medicine and Psychiatry* 2004;28(4):533-559.
- Bekker M: *The Politics of Healthy Policies redesigning health impact assessment to integrate health in public policy*. Rotterdam: Erasmus University; 2007 (PhD dissertation).

Berenson GS, Srinivasan SR, Bao W, Newman WP, Tracy RE, Wattigney WA: Association between multiple cardiovascular risk factors and atherosclerosis in children and young adults. *New England Journal of Medicine* 1998;338(23):1650-1656.

Berentzen TL, Gamborg M, Holst C, Sørensen TI, Baker JL: Body mass index in childhood and adult risk of primary liver cancer. *Journal of Hepatology* 2014;60(2):325-330

Bhaskaran K, Douglas I, Forbes H, Dos-Santos-Silva I, Leon DA, Smeeth L: Body-mass index and risk of 22 specific cancers: a population-based cohort study of 5.24 million UK adults. *Lancet* 2014;384(9945):755-765.

Blakely TA, Kennedy BP, Glass R, Kawachi I: What is the lag time between income inequality and health status? *Journal of Epidemiology & Community Health* 2000;54(4):318-319.

Blockson LC: Multisector approaches to societal issues management. *Business Society* 2003;42(3):381-390.

Bonuck K, Freeman K, Chervin RD, Xu L: Sleep-disordered breathing in a population-based cohort: behavioral outcomes at 4 and 7 years. *Pediatrics* 2012;129(4):857-865.

Borins S: Encouraging innovation in the public sector. *Journal of Intellectual Capital* 2001(3);2:310-319.

Borins S: Leadership and innovation in the public sector. *Leadership & Organization Development Journal* 2002;23(8):467-476.

Borys JM, Le Bodo Y, Jebb SA, Seidell JC, Summerbell C, Richard D, De Henauw S, Moreno LA, Romon M, Visscher TLS, Raffin S, Swinburn B, EEN Study Group: EPODE approach for childhood obesity prevention: methods, progress and international development. *Obesity Reviews* 2012;13(4):299-315.

Bossert TJ: Analyzing the decentralization of health systems in developing countries: decision space, innovation, and performance. *Social Science & Medicine* 1998;47(10):1513-1527.

Bovill C: Rhetoric or reality? Cross-sector policy implementation at the UK government Department for International Development. *Policy and Politics* 2009;37(2):179-199.

- Bowen S, Zwi AB: Pathways to “Evidence-Informed” Policy and Practice: A Framework for Action. *PLoS Medicine* 2005;2(7):600-605.
- Breeman G, Timmermans A, Dalfsen van F: Politiek van de aandacht voor het Nederlandse veiligheidsbeleid (Politics of awareness of Dutch safety policies). 2011. <http://wodc.nl/onderzoeksdatabase/politiek-van-de-aandacht.aspx>. Accessed 16 June 2015.
- Bressers JTA, Hoogerwerf A: Beleidsevaluatie. Alphen aan den Rijn: Samsom HD Tjeenk Willink; 1995.
- Bridges W: Managing transitions: making the most of change. Cambridge: Perseus Publishing; 2003.
- Brink van den G: Van Waarheid Naar Veiligheid. Amsterdam: Sun; 2006.
- Britz B, Siegfried W, Ziegler A, Lamertz C, Herpertz-Dahlmann BM, Remschmidt H, Wittchen H-U, Hebebrand J: Rates of psychiatric disorders in a clinical study group of adolescents with extreme obesity and in obese adolescents ascertained via a population based study. *International Journal of Obesity and Related Metabolic Disorders* 2000;24(12):1707-1714.
- Brown LD, Feinberg ME, Greenberg MT: Measuring coalition functioning: refining constructs through factor analysis. *Health Education & Behavior* 2012;39(4):486-497.
- Brunner RD: Adaptive governance as a reform strategy. *Policy Sciences* 2010;43(4):301-341.
- Buse K, Mays N, Walt G: Making health policy. Milton Keynes: Open University Press; 2005.
- Butland B, Jebbe S, Kopelman P, McPherson K, Thomas S, Mardell J, Parry V: Tackling obesity: future choices - project report. 2007. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf). Accessed 16 June 2015.
- Campell RJ: Change management in health care. *Health Care Management* 2008;27(3):23-39.
- Campbell PT, Jacobs ET, Ulrich CM, Figueiredo JC, Poynter JN, McLaughlin JR, Haile RW, Jacobs EJ, Newcomb PA, Potter JD, Le Marchand L, Green RC, Parfrey P, Younghusband HB, Cotterchio M, Gallinger S, Jenkins MA, Hopper JL, Baron JA,

Thibodeau SN, Lindor NM, Limburg PJ, Martínez ME: Case-control study of overweight, obesity, and colorectal cancer risk, overall and by tumor microsatellite instability status. *Journal of the National Cancer Institute* 2010;102(6):391-400

Campbell PT: Obesity: a certain and avoidable cause of cancer. *The Lancet* 2014;384(9945):727-728.

Cane J, O'Connor D, Michie S: Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science* 2012;7:1-17.

Caraher M, Coveney J: Public health nutrition and food policy. *Public Health Nutrition* 2004;7(5):591-598.

Castell-Florit P: Intersectoral health strategies: from discourse to action. *MEDICC Rev* 2010;12(1):48.

Centers for Disease Control and Prevention: Obesity in K-8 students - New York City, 2006-7 to 2010-11 school years. *Morbidity and Mortality Weekly Report* 2011;60(49):1673-1678.

Chen H, Rauque L, Singh SR, Wu Y, Yang Y: Pacific Island Countries: in search of a trade strategy. 2014.  
<http://www.imf.org/external/pubs/cat/longres.aspx?sk=41859.0>. Accessed 16 June 2015.

Choi T, Robertson PJ: Caucuses in collaborative governance: the effects of structure, power, and problem complexity. 2011. [http://www.maxwell.syr.edu/uploadedFiles/conferences/pmrc/Files/Choi\\_Caucuses%20in%20collaborative%20governance%20The%20effects%20of%20structure%20power%20and%20problem%20complexity.pdf](http://www.maxwell.syr.edu/uploadedFiles/conferences/pmrc/Files/Choi_Caucuses%20in%20collaborative%20governance%20The%20effects%20of%20structure%20power%20and%20problem%20complexity.pdf). Accessed 16 June 2015.

Christian MS, Garza AS, Slaughter JE: Work engagement: a quantitative review and test of its relations with task and contextual performance. *Personnel Psychology* 2011;64(1):89-136.

Cohen MD, March JG, Olsen JP: A garbage can model of organizational choice. *Administrative Science Quarterly* 1972;17(1):1-35.

Conklin J: Dialogue mapping: building shared understanding of wicked problems. Chichester: Wiley; 2006.

- Connelly FM, Clandinin DJ: Stories of experience and narrative inquiry. *Educational Researcher* 1990;19(5):2-4.
- Corey SM: Action research, fundamental research, and educational practices. *Teachers College Record* 1949;50(8):509-514.
- Craig RL, Felix HC, Walker JF, Phillips MM: Public health professionals as policy entrepreneurs: Arkansas's childhood obesity policy experience. *American Journal of Public Health* 2010;100(11):2047-2052.
- Curtis M: The Obesity Epidemic in the Pacific Islands, 2004, *Journal of Development and Social Transformation*. <http://www.maxwell.syr.edu/uploadedFiles/moynihan/dst/curtis5.pdf>. Accessed 16 June 2015.
- Dahlgren G, Whitehead M: Policies and strategies to promote social equity in health. Stockholm: Institute for Future Studies; 1991.
- Daniels SR: The consequences of childhood overweight and obesity. *Future Child* 2006;16(1):47-67.
- Davis A: Value for money: an economic assessment of investment in walking and cycling. 2010. <http://www.apho.org.uk/resource/item.aspx?RID=91553>. Accessed 16 June 2015.
- Dee A, Kearns K, O'Neill C, Sharp L, Staines A, O'Dwyer V, Fitzgerald S, Perry IJ: The direct and indirect costs of both overweight and obesity: a systematic review. *BioMed Central Research Notes* 2014;7(1):242-251.
- Department of Health: Healthy Lives, Healthy People: Our strategy for public health in England. 2010. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/216096/dh\\_127424.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf). Accessed 24 June 2015.
- Department of Health: The new public health role of local authorities. 2012. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213009/Public-health-role-of-local-authorities-factsheet.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213009/Public-health-role-of-local-authorities-factsheet.pdf). Accessed 16 June 2015.
- Derksen W, Schaap L: *Lokaal Bestuur*. Dordrecht: Convoy Uitgevers B.V.; 2010.
- Desroches S, Lapointe A, Ratté S, Gravel K, Légaré F, Turcotte S: Interventions to enhance adherence to dietary advice for preventing and managing chronic diseases in adults. *Cochrane Database of Systematic Reviews* 2013;28(2):1-140.

- Dorfman L, Wallack L: Moving nutrition upstream: the case for reframing obesity. *Journal of Nutrition Education and Behavior* 2007;39(2):45-50.
- Dowling B, Powell M, Glendinning C: Conceptualising successful partnerships. *Health & Social Care in the Community* 2004;12(4):309-317.
- Dubé L, Addy NA, Blouin C, Drager N: From policy coherence to 21st century convergence: a whole-of-society paradigm of human and economic development. *Annals of the New York Academy of Sciences* 2014;1331(6124):201-215.
- Duncan GE, Li SM, Zhou XH: Prevalence and trends of a metabolic syndrome phenotype among U.S. adolescents, 1999-2000. *Diabetes Care* 2004;27(10):2438-2443.
- Ebrahim S, Pearce N, Smeeth L, Casas JP, Jaffar S, Piot P: Tackling non-communicable diseases in low- and middle-income countries: is the evidence from high-income countries all we need? *PLoS Medicine* 2013;10(1):e1001377.
- Eccles JS, Wigfield A: Motivational beliefs, values, and goals. *Annual Review of Psychology* 2002;53(1):109-132.
- Eisenhardt KM: Building theories from case study research. *Academy Management Review* 1989;14(4):532-550.
- Emerson K, Nabatchi T, Balogh S: An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory* 2011;22(1):1-29.
- English M: Designing a theory-informed, contextually appropriate intervention strategy to improve delivery of paediatric services in Kenyan hospitals. *Implementation Science* 2013;8(39):1-13.
- EPODE: EPODE international network. 2014. <http://epode-international-network.com/about/context/2014/09/15/epode-international-network>. Accessed 16 June 2015.
- Eversole R: Community agency and community engagement: re-theorising participation in governance. *Journal of Public Policy* 2011;31(1):51-71.
- Eversole R: Remaking participation: challenges for community development practice. *Community Development Journal* 2012;47(1):29-41.
- Exworthy ML: Policy to tackle the social determinants of health: using conceptual models to understand the policy process. *Health Policy Plan* 2008;23(5):318-327.



Feng J, Glass TA, Curriero FC, Stewart WF, Schwartz BS: The built environment and obesity: a systematic review of the epidemiologic evidence. *Health and Place* 2010;16(2):175-190.

Fernandez S, Rainey HG: Managing Successful Organizational Change in the Public Sector. *Public Administration Review* 2006;66(2):168-176.

Fiji Islands Bureau of Statistics: Fiji Facts and Figures as at 1st July 2010. 2011. <http://www.spc.int/prism/fjtest/Releases/FFF2010.pdf>. Accessed 16 June 2015.

Finegood DT, Merth TDN, Rutter H: Implications of the foresight obesity system map for solutions to childhood obesity. *Obesity* 2010;18(1):13-16.

Finegood DT: The importance of systems thinking to address obesity. Nestlé Nutrition Institute Workshop Series. 2012;73:123–137.

Finkelstein EA, Trogon JG, Cohen JW, Dietz WH: Annual medical spending attributable to obesity: payer- and service-specific estimates. *Health Affairs* 2009;28(5):822-831.

Finkelstein EA, Khavjou OA, Thompson H, Trogon JG, Pan L, Sherry B, Dietz W: Obesity and severe obesity forecasts through 2030. *American Journal of Preventive Medicine* 2012;42(6):563-570.

Franco M, Orduñez P, Caballero B, Cooper RS: Obesity reduction and its possible consequences: what can we learn from Cuba's special period? *Canadian Medical Association* 2008;178(8):1032-1034.

Fraser SW, Greenhalgh T: Coping with complexity: educating capability. *British Medical Journal* 2001;323(7316):799-803.

Freedman DS, Khan LK, Serdula MK, Dietz WH, Srinivasan SR, Berenson GS: The relation of childhood BMI to adult adiposity: the Bogalusa heart study. *Pediatrics* 2005;115(1):22-27.

Freijer K, Tan SS, Koopmanschap MA, Meijers JMM, Halfens RJG, Nuijten MJC: The economic costs of disease related malnutrition. *Clinical Nutrition* 2013;32(1):136-41.

Freiler A, Muntaner C, Shankardass K, Mah CL, Molnar A, Renahy E, O'Campo P: Glossary for the implementation of Health in All Policies (HiAP). *Journal of Epidemiology & Community Health* 2013;67(12):1068-1072.

- Frum D: Bloomberg's Visionary move against obesity. 2012.  
<http://edition.cnn.com/2012/06/04/opinion/frum-bloomberg-soda/>. Accessed 16 June 2015.
- Giesbers H: Steden in Het Grotestedenbeleid-Volksgezondheid Toekomst Verkenning, Nationale Atlas Volksgezondheid, Rijksinstituut voor Volksgezondheid en Milieu, Bilthoven, The Netherlands, 2006, <http://www.zorgatlas.nl/thema-s/gebiedsindelingen-en-topografie/gebiedsindelingen/steden-in-het-grotestedenbeleid/>. Accessed 16 June 2015.
- Glickman D, Parker L, Sim LJ, Del Valle Cook H, Miller EA: Progress in obesity prevention: solving the weight of the nation. 2012.  
[http://extension.oregonstate.edu/physicalactivity/sites/default/files/accelerating\\_progress\\_in\\_obesity\\_prevention.pdf](http://extension.oregonstate.edu/physicalactivity/sites/default/files/accelerating_progress_in_obesity_prevention.pdf). Accessed 16 June 2015.
- Goodin RE: The Theory of Institutional Design. Cambridge: Cambridge University; 1996.
- Gortmaker SL, Swinburn BA, Levy D, Carter R, Mabry PE, Finegood DT, Huang T, Marsh T, Moodie ML: Changing the future of obesity: science, policy, and action. *The Lancet* 2011;378(4):838-874.
- Gray B: Conditions facilitating interorganizational collaboration. *Human Relations* 1985;38(10):911-936.
- Gray M: Public health leadership: creating the culture for the twenty-first century. *Journal of Public Health* 2009;31(2):208-209.
- Gustafson DH, Sainfort F, Eichler M, Adams L, Bisognano M, Steudel H: Developing and testing a model to predict outcomes of organizational change. *Health Services Research* 2003;38(2):751-776.
- Han JC, Lawlor DA, Kimm SYS: Childhood obesity 2010: progress and challenges. *Lancet* 2010;375(9727):1737-1748.
- Hardoon SL, Morris RW, Whincup PH, Shipley MJ, Britton AR, Masset G, Stringhini S, Sabia S, Kivimaki M, Singh-Manoux A, Brunner EJ: Rising adiposity curbing decline in the incidence of myocardial infarction: 20-year follow-up of British men and women in the Whitehall II cohort. *European Heart Journal* 2012;33(4):478-485.
- Harris A, Spillane J: Distributed leadership through the looking glass. *Management in Education* 2008;22(1):31-34.

Harting J, Paauwe L, Stronks K: Theoretische perspectieven op intersectorale samenwerking en integraal beleid. Een thematische review. Theoretical perspectives on intersectoral collaboration and integrated policy: thematic review. Amsterdam: Academisch Medisch Centrum Sociale Geneeskunde; 2011.

Head BW: Wicked problems in public policy. *Public Policy* 2008;3(2):101-118.

Head BW, Alford J: Wicked Problems: Implications for Public Policy and Management. *Administration & Society* 2013;X(XX):1-29.

Health Council of the Netherlands: On the Move. The Effect of the Built Environment on Our Physical Activity, Health Council of the Netherlands. 2010. <http://www.gezondheidsraad.nl/en/publications/gezonde-leefomgeving/on-the-move-the-effect-of-the-built-environment-on-our-physical>. Accessed 26 June 2015.

Hendriks A-M, Kremers SPJ, Jansen MWJ, Seidel JC, Vries de NK, Gubbels JS: Interventions to promote an integrated approach to public health problems: an application to childhood obesity. *Journal of Environmental and Public Health* 2012;2012(2012):1-14.

Hendriks A-M, Kremers SPJ, Gubbels JS, Raat H, Vries de NK, Jansen MWJ: Towards health in All policies for childhood obesity prevention. *Journal of Obesity* 2013a;2013(2013):1-12.

Hendriks A-M, Jansen MWJ, Gubbels JS, Vries de NK, Paulussen T, Kremers SPJ: Proposing a theoretical framework for integrated health policy making with an application to childhood obesity - The Behavior Change Ball. *Implementation Science* 2013b;8:46-62.

Hendriks A-M, Habraken J, Jansen MWJ, Gubbels JS, Vries de NK, Oers van HAM, Michie S, Atkins L, Kremers SPJ: 'Are we there yet?' - operationalizing the concept of integrated public health policies. *Health Policy* 2014;114(2):174-182.

Hendriks A-M, Jansen MWJ, Gubbels JS, Vries de NK, Molleman GRM, Kremers SPJ: Local government officials' views on intersectoral collaboration within their organization - A qualitative exploration. *Health Policy and Technology* 2015a;4(1):47-57.

Hendriks A-M, Delai MY, Thow A-M, Gubbels JS, Vries de NK, Kremers SPJ, Jansen MWJ: Perspectives of Fijian policymakers on the obesity prevention policy landscape. *BioMed Research International* 2015b, in press.

Hendriks A-M, Jansen MW, Gubbels JS, Vries de NK, Kremers SP: One more question to guide the development and implementation of health in all policies: integrate? *Health Promotion International* 2015c:1-3.

Herman KM, Craig CL, Gauvin L, Katzmarzyk PT: Tracking of obesity and physical activity from childhood to adulthood: the physical activity longitudinal study. *International Journal of Pediatric Obesity* 2009;4(4):281-288.

Hewlin PF: And the award for best actor goes to...: facades of conformity in organizational settings. *Academy of Management Review* 2003;28(4):633-642.

Himmelman AT: Collaboration for a change: definitions, decision-making roles, and collaboration process guide. 2002.

[https://depts.washington.edu/ccph/pdf\\_files/4achange.pdf](https://depts.washington.edu/ccph/pdf_files/4achange.pdf). Accessed 16 June 2015.

Ho ATK: Reinventing local governments and the E- government initiative. *Public Administration Review* 2002;62(4):434-443.

Hoeberigs AM, Eurlings MJA: Raadsnota: concernplan en concernplanning. Gemeente Valkenburg. 2010.

<http://www.valkenburg.nl/document.php?fileid=9707&m=1&f=98ef7a59cddea12340178fbb4a482493&attachment=0&a=687>. Accessed 16 June 2015.

Hoeijmakers M, Leeuw de E, Kenis P, Vries de NK: Local health policy development processes in the Netherlands: an expanded toolbox for health promotion. *Health Promotion International* 2007;22(2):112-121.

Hoffman LR, Norman AMD, Maier RF: Quality and acceptance of problem solutions by members of homogeneous and heterogeneous groups. *Journal of Abnormal & Social Psychology* 1981;62(2):401-407.

Holling CS: Adaptive environmental assessment and management. Chichester: Wiley; 1978.

Hoogewerf A: Beleid, processen en effecten in Overheidsbeleid. Een inleiding in de beleidswetenschap. Alphen aan de Rijn: Samson; 1998.

Humphreys JS, Kuipers P, Wakerman J, Wells R, Jones JA, Kinsman LD: How far can systematic reviews inform policy development for 'wicked' rural health service problems? *Australian Health Review* 2009;33(4):592-600.

Hunter DJ: Leading for Health and Wellbeing: the need for a new paradigm. *Journal of Public Health* 2009;31(2):202-204.

Hurt RT, Kulisek C, Buchanan LA, McClave SA: The Obesity Epidemic: Challenges, health initiatives, and implications for gastroenterologists. *Gastroenterology & Hepatology* 2010;6(12):780-792.

Huang TT, Cawley JH, Ashe M, Costa SA, Frerichs LM, Zwicker L, Kumanyika SK: Mobilisation of public support for policy actions to prevent obesity. *Lancet* 2015, in press.

Huxham C: Action research as a methodology for theory development. *Policy & Politics* 2003;31(2):239-248.

Inspectie voor de Gezondheidszorg (The Dutch Health Care Inspectorate): Staat van de gezondheidszorg. Meer effect mogelijk van publieke gezondheidszorg (The current state of health care: achieving greater effects with public health care). 2010. [http://www.igz.nl/Images/2010-03%20Staat%20van%20de%20Gezondheidszorg%202010\\_tcm294-275233.pdf](http://www.igz.nl/Images/2010-03%20Staat%20van%20de%20Gezondheidszorg%202010_tcm294-275233.pdf). Accessed 16 June 2015.

Ingelsson E, Sullivan LM, Fox CS, Murabito JM, Benjamin EJ, Polak JF, Meigs JB, Keyes MJ, O'Donnell CJ, Wang TJ, D'Agostino RB, Wolf PA, Vasan RS: Burden and prognostic importance of subclinical cardiovascular disease in overweight and obese individuals. *Circulation* 2007;116(4):375-384.

Isett KR, Provan KG: The evolution of dyadic interorganizational relationships in a network of publicly funded nonprofit agencies. *Journal of Public Administration Research and Theory* 2005;15(1):149-165.

Jansen MWJ: Mind the gap: collaboration between practice, policy and research in local public health. Maastricht: Maastricht University; 2007 (PhD dissertation).

Jansen MWJ, Oers van HAM, Kok G, Vries de NK: Public health: disconnections between policy, practice and research. *Health Research Policy and Systems* 2010;8:37-51.

Jansen MWJ: All healthcare workers: put on your high heels. 2012. <http://www.youtube.com/watch?v=LHmXY5vq1Bw>. Accessed 16 June 2015.

Jenkin GL, Signal L, Thomson G: Framing obesity: the framing contest between industry and public health at the New Zealand inquiry into obesity. *Obesity Reviews* 2011;12(12):1022-1030.

- Jewell CJ, Bero LA: Developing good taste in evidence: facilitators of and hindrances to evidence-informed health policymaking in state government. *Milbank Quarterly* 2008;86(2):177-208.
- Jongeren Op Gezond Gewicht: JOGG Plan van Aanpak 2010-2015. 2010. <http://www.convenantgezondgewicht.nl/download/8/jogg-plan-van-aanpak-100914.pdf>. Accessed 16 June 2015.
- Johnston LM, Matteson CL, Finegood DT: Systems science and obesity policy: a novel framework for analyzing and rethinking population-level planning. *American Journal of Public Health* 2014;104(7):1270-1278.
- Jones J, Barry MM: Developing a scale to measure synergy in health promotion partnerships. *Global Health Promotion* 2011;18(2):36-44.
- Goede de J, Putters K, Grinten van der T, Oers van HAM: Knowledge in process? Exploring barriers between epidemiological research and local health policy development. *Health Research Policy and Systems* 2010;8:26-37.
- Kahn LK, Sobush K, Keener D, Goodman K, Lowry A, Kakietek J, Zaro S: Recommended community strategies and measurements to prevent obesity in the united states. 2009. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm>. Accessed 16 June 2015.
- Kegeles SM, Rebchook GM, Tebbetts S: Challenges and facilitators to building program evaluation capacity among community-based organizations. *AIDS Education and Prevention* 2005;17(4):284-299.
- Kelsey MM, Zaepfel A, Bjornstad P, Nadeau KJ: Age-Related Consequences of Childhood Obesity. *Gerontology* 2014(3);60:222-228.
- Kenis P, Schneider V: Policy networks and policy analysis: scrutinizing a new analytical toolbox. Boulder: Westview Press; 2001.
- Khandekar MJ, Cohen P, Spiegelman BM: Molecular mechanisms of cancer development in obesity. *Nature Reviews Cancer* 2011;11(12):886-895.
- Khor M: Rethinking Liberalization and Reforming the WTO. 2000. <http://www.twn.my/title/davos2-cn.htm>. Accessed 16 June 2015.
- Kickbusch I, McCann W, Sherbon T: Adelaide revisited: from healthy public policy to health in all policies. *Health Promot International* 2008;23(1):1-4.
- Kickbusch I: Policy innovations for health. New York: Springer; 2009.

- Kickbusch I, Buckett K: Implementing Health in All Policies: Adelaide 2010. 2010. <http://www.who.int/sdhconference/resources/implementinghiapadel-sahealth-100622.pdf>. Accessed 26 June 2015.
- Kickbusch I, Gleicher D: Governance for health in the 21st century. 2012. [http://www.euro.who.int/\\_data/assets/pdf\\_file/0019/171334/RC62BD01-Governance-for-Health-Web.pdf](http://www.euro.who.int/_data/assets/pdf_file/0019/171334/RC62BD01-Governance-for-Health-Web.pdf). Accessed 16 June 2015.
- Kickbusch I, McCann W, Sherbon T: Adelaide revisited: from healthy public policy to Health in All Policies. *Health Promotion International* 2008;23(1):1-4.
- Kingdon JW: Agendas, alternatives and public policies. New York: Addison-Wesley Educational Publishers Inc.; 2003.
- Kirk SFL, Penney TL: The role of health systems in obesity management and prevention: problems and paradigm shifts. *Current Obesity Reports* 2013;2(4):315-319.
- Klarenbach S, Padwal R, Chuck A, Jacobs P: Population-based analysis of obesity and workforce participation. *Obesity* 2006;14(5):920-927.
- Klein JD, Dietz W: Childhood obesity: the new tobacco. *Health Affairs* 2010;29(3):388-392.
- Kopelman P, Jebb SA, Butland B: Executive summary: foresight “tackling obesities: future choices” project. *Obesity Reviews* 2007;8(1):1-4.
- Kok MO, Schuit AJ: Contribution mapping: a method for mapping the contribution of research to enhance its impact. *Health Research Policy and Systems* 2012;10(21):1-16.
- Konrad EL: A multidimensional framework for conceptualizing human service integration initiatives. *American Evaluation Association* 1996;1996(69):5-19.
- Koperen van TM, Jebb SA, Summerbell CD, Visscher TLS, Romon M, Borys JM, Seidell JC: Characterizing the EPODE logic model: unravelling the past and informing the future. *Obesity reviews* 2013;14(2):162-170.
- Koperen van TM, Kleij van der MJJ, Renders CM, Crone MR, Hendriks A-M, Jansen MWJ, Gaar van de VM, Raat JH, Ruiter ELM, Molleman GRM, Schuit AJ, Seidell JC: Design of CIAO, a research program to support the development of an integrated approach to prevent overweight and obesity in the Netherlands. *BioMedCentral Obesity* 2014;1:1-12.

Kotter JP: Leading change: Why transformation efforts fail. *Harvard Business Review* 1995;73:59-67.

Kotter JP: *Leading Change*. Boston: Harvard Business School; 1996.

Kraig KA., Keel PK: Weight-based stigmatization in children. *International Journal of Obesity* 2001;25(11):1661-1666.

Kranzler Y, Davidovich N, Fleischman Y, Grotto I, Moran DS, Weinstein R: A health in all policies approach to promote active, healthy lifestyle in Israel. *Israel Journal of Health Policy Research* 2013;2(16):1-14.

Kremers SPJ, Bruijn de GJ, Visscher TLS, Mechelen van W, Vries de NK, Brug J: Environmental influences on energy balance-related behaviors: a dual-process view. *International Journal of Behavioral Nutrition and Physical Activity* 2006;3:1-10.

Kreuter MW, De Rosa C, Howze EH, Baldwin GT: Understanding wicked problems: a key to advancing environmental health promotion. *Health Education & Behavior* 2004;31(4):441-454.

Lang T, Rayner G: Overcoming policy cacophony on obesity: an ecological public health framework for policymakers. *Obesity Reviews* 2007;8:165-181.

LaPalombara J: *Power and politics in organizations: public and private sector comparisons*. Oxford: Oxford University Press; 2001.

Lasker RD, Weiss ES, Miller R: Partnership synergy: a practical framework for studying and strengthening the collaborative advantage. *Milbank Quarterly* 2001;79(2):179-205.

Leeuw de E, Poelman L: Health policy making: the Dutch experience. *Social Science & Medicine* 1995;40(3):331-338.

Leeuw de E, Peters D: Nine questions to guide development and implementation of Health in All Policies. *Health Promotion International* 2014;24:1-11.

Lehnert T, Stuhldreher N, Streltchenia P, Riedel-Heller SG, König HH: Sick leave days and costs associated with overweight and obesity in Germany. *Journal of Occupational and Environmental Medicine* 2014;56(1):20-27.

Lempert DA: *The Economic Causes and Consequences of Overweight and Obesity in the United States*. Dissertations and Theses, 2014-Present. Paper 246. [http://academicworks.cuny.edu/gc\\_etds/246/](http://academicworks.cuny.edu/gc_etds/246/). Accessed 22 June 2015.



- Leppo K, Ollila E, Peña S, Wismar M, Cook S: Health in All Policies: Seizing Opportunities, Implementing Policies. Helsinki: Ministry of Social Affairs and Health 2013;1-358.
- Lindblom CE: The science of “muddling through”. *Public Administration Review* 1959;19(2):79-88.
- Lobstein T, Baur L, Uauy R: Obesity in children and young people: a crisis in public health. *Obesity Reviews* 2004;5(1):4-85.
- Lobstein T, Bauer LA: Policies to prevent childhood obesity in the European Union. *European Journal of Public Health* 2005;15(6):576-579.
- Lobstein T, Jackson-Leach R, Moodie ML, Hall KD, Gortmaker SL, Swinburn BA, James WPT, Wang Y, McPherson K: Child and adolescent obesity: part of a bigger picture. *The Lancet* 2015;385(9986):2510–2520.
- Local Government Association: LG Group on the Day Briefing: Healthy Lives, Healthy People: Our strategy for public health in England (Public Health White Paper). 2011, [http://www.local.gov.uk/briefings-and-responses/-/journal\\_content/56/10180/3494547/ARTICLE](http://www.local.gov.uk/briefings-and-responses/-/journal_content/56/10180/3494547/ARTICLE). Accessed 22 June 2015.
- Lukes S: *Power: a radical view*. London: Macmillan; 1974.
- Maas J, Storm I. Integraal gezondheidsbeleid op nationaal niveau. Wat kunnen we leren van de ervaringen uit andere landen? (Integrated health policies at national level. What can we learn from experiences in other countries?). Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu (RIVM); 2011.
- Magnusson D, Stattin H: *The person in context: a holistic-interactionistic approach*. New York: Willey; 2006.
- Mallory GB, Fiser DH, Jackson R: Sleep-associated breathing disorders in morbidly obese children and adolescents. *Journal of Pediatrics* 1989;115(6):892-897.
- Manheimer LN, Gulis G, Lehto J, Östlin P: Introducing health impact assessment: an analysis of political and administrative intersectoral working methods. *European Journal of Public Health* 2007;17(5):526-531.
- Mannheimer LN, Gulis G, Lehto J, Ostlin P: Introducing Health Impact Assessment: an analysis of political and administrative intersectoral working methods. *European Journal of Public Health* 2007;17(5):526-531.

Manson JE, Colditz GA, Stampfer MJ, Willett WC, Rosner B, Monson RR, Speizer FE, Hennekens CH: A prospective study of obesity and risk of coronary heart disease in women. *New England Journal of Medicine* 1990;322(13):882-889.

Marcus MD, Foster GD, El Ghormli L, Baranowski T, Goldberg L, Jago R, Linder B, Steckler A, Treviño R: Shifts in BMI category and associated cardiometabolic risk: prospective results from HEALTHY study. *Pediatrics* 2012;129(4):983-991.

Marteau TM, Ogilvie D, Roland M, Suhrcke M, Kelly MP: Judging nudging: can nudging improve population health? *British Medical Journal* 2011;342(7791):263-265.

Martin J, Peeters A, Honisett S, Mavoa H, Swinburn B, De Silva-Sanigorski A: Benchmarking government action for obesity prevention –An innovative advocacy strategy. *Obesity Research & Clinical Practice* 2014;8(4):388-398.

Matland RE: Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation. *Journal of Public Administration Research and Theory: J-PART*;5(2):145-174.

Mavoa H, Waqa G, Moodie M, Kremer P, McCabe M, Snowdon W, Swinburn BA: Knowledge exchange in the Pacific: The TROPIC (Translational Research into Obesity Prevention Policies for Communities) project. *BioMed Central Public Health* 2012;12:552-561.

Mavoa HM, McCabe M: Sociocultural factors relating to Tongans' and Indigenous Fijians' patterns of eating, physical activity and body size. *Asia Pacific Journal of Clinical Nutrition* 2008;17(3):375-384.

Mayberry RM, Daniels P, Akintobi TH, Yancey EM, Berry J, Clark N: Community-based organizations' capacity to plan, implement, and evaluate success. *Journal of community health* 2008;33(5):285-292.

Mayer-Foulkes DA: A survey of macro damages from Non-communicable chronic diseases: another challenge for global governance. *Global Economy Journal* 2011;11(1):1-27.

McInerney DM: A discussion of future time perspective. *Educational Psychology Review* 2004;16(2):141-151.

Mccabe MP, Mavoa H, Ricciardelli LA, Schultz JT, Waqa G, Fotu KF: Socio-cultural agents and their impact on body image and body change strategies among adolescents in Fiji, Tonga, Tongans in New Zealand and Australia. *Obesity Reviews* 2011;12(2):61-67.

- McConnell A: Policy success, policy failure and gray areas in-between. *Journal of Public Policy* 2010;30(3):345-62.
- McGee R, Brock K: From poverty assessment to policy change: processes actors and data. Brighton: Institute of Development studies; 2001.
- McGill HC, McMahan CA, Zieske AW, Malcom GT, Tracy RE, Strong JP: Effects of nonlipid risk factors on atherosclerosis in youth with a favorable lipoprotein profile. *Circulation* 2001;103(11):1546-1550.
- McGuire M: Collaborative public management: assessing what we know and how we know it. *Public Administration Review* 2006;66(1)33-43.
- McQueen DV, Wismar M, Lin V, Jones CM, Davies M. Intersectoral governance for Health in All Policies: structures, actions and experiences. *Observatory Studies Series* 2012;26:1-122.
- Mellaard A, Spanbroek K: De GGD als advies- en regie-instituut. Regional public health services as advisory and supervisory institutes. *TSG Tijdschrift voor Gezondheidswetenschappen* 2008;86(383-384):383-384.
- Mendis S: The policy agenda for prevention and control of non-communicable diseases. *British Medical Bulletin* 2010;96(1):23-43.
- Merry MS: Paternalism, obesity, and tolerable levels of risk. *Democracy and Education* 2012;20(1):1-6.
- Michie S, Van Stralen MM, West R: The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science* 2011;6:1-12.
- Michie S, Richardson M, Johnston M, Abraham C, Francis J, Hardeman W, Eccles MP, Cane J, Wood CE: The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annuals of Behavioral Medicine* 2013;1(93):1-15.
- Milio N: Evaluation of health promotion policies: tracking a moving target. Copenhagen: WHO Regional Publications; 2001.
- Milio N: Glossary: healthy public policy. *Journal of Epidemiology and Community Health* 2001;55(9):622-623.

Ministerie Volksgezondheid, Welzijn en Sport: Landelijke nota gezondheidsbeleid 'Gezondheid Dichtbij'. Rijksoverheid. The Hague, The Netherlands, 2011. <http://www.rijksoverheid.nl/documenten-en-publicaties/notas/2011/05/25/landelijke-nota-gezondheidsbeleid.html>. Accessed 22 June 2015.

Ministry of Health and Medical Services: Fiji's National Strategic NCD Plan 2010-2014. 2010. [http://www.health.gov.fj/wp-content/uploads/2014/05/2\\_National-Non-Communicable-Diseases-Strategic-Plan-2010-2014.pdf](http://www.health.gov.fj/wp-content/uploads/2014/05/2_National-Non-Communicable-Diseases-Strategic-Plan-2010-2014.pdf). Accessed 22 June 2015.

Mintzberg H: Structure in fives. Designing effective organizations. New Jersey: Prentice-Hall; 1993.

Mintzberg H: Organisatiestructuren. Amsterdam: Pearson Education Benelux; 2008.

Murphy KM, Shleifer A: Persuasion in politics. *American Economic Review* 2004;94(2):435-439.

MAXQDA: Qualitative Data Analysis Software. <http://www.maxqda.com/>. Accessed 22 June 2015.

Narsey W, Raikoti T, Waqavonovono E: Report on the 2008-09 Household Income and Expenditure Survey for Fiji, Fiji Islands Bureau of Statistics, Suva, Fiji, 2011, <http://www.statsfiji.gov.fj/index.php/census-and-surveys/47-census-and-surveys/population-census/124-2008-2009-household-income-and-expenditure-survey-hies>. Accessed 22 June 2015.

National Institute for Health and Clinical Evidence: Preventing obesity: a whole-system approach: call for evidence. 2010. <https://www.nice.org.uk/guidance/ph42/documents/preventing-obesity-a-wholesystem-approach-call-for-evidence>. Accessed 22 June 2015.

Neel JV: Diabetes mellitus: a "thrifty" genotype rendered detrimental by "progress"? *The American Journal of Human Genetics* 1962;14(4):353-362.

Nestle M: Food industry and health: mostly promises, little action. *Lancet* 2006;368(9535):564-565.

Neumark-Sztainer D, Falkner N, Story M, Perry C, Hannan PJ, Mulert S: Weight-teasing among adolescents: correlations with weight status and disordered eating behaviors. *International Journal of Obesity* 2002;26(1):123-131.

- Ng M, Fleming T, Robinson M, et al.: Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2014;384(9945):766–781.
- Nguyen NT, Nguyen XMT, Lane J, Wang P: Relationship between obesity and diabetes in a US adult population: findings from the national health and nutrition examination survey, 1999-2006. *Obesity Surgery* 2011;21(3):351-355.
- Nilsen P, Ståhl C, Roback K, Cairney P: Never the twain shall meet? - A comparison of implementation science and policy implementation research. *Implementation Science* 2013;8(1):63-75.
- Novak NL, Brownell KD: Role of policy and government in the obesity epidemic. *Circulation*. 2012;126(19):2345-2352
- Notwotny H: Democratising expertise and socially robust knowledge. *Science and Public Policy* 2003;30(3):151-156.
- O'Connor-Fleming M, Parker E, Higgins H, Gould T: A framework for evaluating health promotion programs. *Health Promotion Journal of Australia* 2006;17(1):61-6.
- Okosun IS, Boltri JM, Lyn R, Davis-Smith M: Continuous metabolic syndrome risk score, body mass index percentile, and leisure time physical activity in American children. *Journal of Clinical Hypertension* 2010;12(8):636-644.
- Ollila E: Health in All Policies: From rhetoric to action. *Scandinavian Journal of Public Health* 2011;39(6):11-18.
- Onis de M, Blössner M., Borghi E: Global prevalence and trends of overweight and obesity among preschool children. *American Journal of Clinical Nutrition* 2010;92(5):1257-1264.
- Ottova V, Erhart M, Rajmil L, Dettenborn-Betz L, Ravens-Sieberer U: Overweight and its impact on the health-related quality of life in children and adolescents: results from the European KIDSCREEN survey. *Quality of Life Research* 2012;21(1):59-69.
- PAHO: Steering role of the national health authority: performance and strengthening. Washington: Pan American Health Organization; 2007.
- Parry KW, Hansen H: The organizational story as leadership. *Leadership* 2007;3(3):281-300.

- Paulus P: Groups, teams, and creativity: the creative potential of idea generating groups. *Applied Psychology* 2000;49(2):237-262.
- Paulussen T, Wiefferink K, Mesters I: Invoering van effectief gebleken interventies. (Implementing interventions that have proved effective). Assen: Van Gorcum; 2007.
- Peeler CL, Kolish ED, Enright M, Burke C: The children's food & beverage advertising initiative in action. Arlington, USA: Council of Better Business Bureaus; 2011. <http://www.bbb.org/storage/16/documents/cfbai/cfbai-2010-progress-report.pdf>. Accessed 22 June 2015.
- Peters GB: Institutional theory in political science: the "new institutionalism". London: Continuum International Publishing Group; 2005.
- Petty RE, Cacioppo JT: The Elaboration Likelihood Model of Persuasion. New York: Academic Press; 1986.
- Phan HP: Future time perspective in sociocultural contexts: a discussion paper. *Electronic Journal of Research in Educational Psychology* 2009;7(2):761-778.
- Phillips MM, Ryan K, Raczynski JM: Public policy versus individual rights in childhood obesity interventions: perspectives from the Arkansas experience with act 1220 of 2003. *Preventive Chronic Disease* 2011;8(5):96-103.
- Pope C, Ziebland S, Mays N: Analysing qualitative data. *British Medical Journal* 2000;320(7227):114-116.
- Public Health Agency of Canada: Crossing sectors - experiences in intersectoral action, public policy and health. 2007. <http://www.phac-aspc.gc.ca/publicat/2007/cro-sec/index-eng.php>. Accessed 25 June 2015.
- Puhl R, Brownell KD: Bias, discrimination, and obesity. *Obesity Research* 2001;9(12):788-805.
- Putters K: HIA, the next step: defining models and roles. *Environmental Impact Assessment Review* 2005;25(7-8):693-701.
- Raad voor de Leefomgeving en Infrastructuur. Doen en Laten: gedragsanalysekader voor de ontwikkeling van effectiever milieubeleid. 2014.
- Rahman T, Cushing RA, Jackson RJ: Contributions of built environment to childhood obesity. *Mount Sinai Journal of Medicine* 2011;78(1):49-57.

- Rai RK: Factors associated with nutritional status among adult women in urban India. *Asia-Pacific Journal of Public Health* 2012;27(2):1-12.
- Raphael D: Addressing the social determinants of health in Canada: bridging the gap between research findings and public policy. *Policy Options* 2003;24(3):35-40.
- Rijksoverheid: Wet publieke gezondheid. Law on public health. 2008. [http://wetten.overheid.nl/BWBR0024705/geldigheidsdatum\\_08-01-2010](http://wetten.overheid.nl/BWBR0024705/geldigheidsdatum_08-01-2010). Accessed 23 June 2015.
- Reilly JJ, Kelly J: Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: systematic review. *International journal of obesity* 2011;35(7):891-898.
- Roberto CA, Swinburn B, Hawkes C, Huang TT-K, Costa SA, Ashe M, Zwicker L, Cawley JH, Brownell KD: Patchy progress on obesity prevention: emerging examples, entrenched barriers, and new thinking. *The Lancet* 2015;385(9985):2400-2409.
- Rothschild ML: Carrots, sticks, and promises: a conceptual framework for the management of public health and social issue behaviors. *Journal of Marketing* 1999;63(4):24- 37.
- Rijksinstituut voor Volksgezondheid en Milieu (RIVM): Handreiking gezonde gemeente: de beleidscyclus. 2011. [http://www.loketgezondleven.nl/object\\_binary/o10855\\_Factsheet%20Beleidscyclus%20DEF%20aangepast.pdf](http://www.loketgezondleven.nl/object_binary/o10855_Factsheet%20Beleidscyclus%20DEF%20aangepast.pdf). Accessed 23 June 2015.
- Rittel HWJ, Webber MM: Dilemmas in a general theory of planning. *Policy Sciences* 1973;4(2):155-169.
- Robbins SP, Judge TA: *Organizational behavior*. New Jersey: Prentice Hall; 2011.
- Rocchini AP: Childhood obesity and a diabetes epidemic. *New England Journal of Medicine* 2002;346(11):854-855.
- Rogers EM: *Diffusion of Innovations*. New York: Free Press; 2003.
- Romon M, Lommez A, Tafflet M, Basdevant A, Oppert JM, Bresson JL, Ducimetrière P, Charles MA, Borys JM: Downward trends in the prevalence of childhood overweight in the setting of 12-year school- and community-based programs. *Public Health Nutrition* 2009;12(10):1735-1742.

Rousseau DM, Fried Y: Location, location, location: contextualizing organizational research. *Journal of Organizational Behavior* 2001;22(1):1-13.

Rotschild ML: Carrots, stick, and promises: a conceptual framework for the management of public health and social issue behaviors. *Journal of Marketing* 1999;63(4):24-37.

Rudolph L, Caplan J, Ben-Moshe K, Dillon L: *Health in All Policies: A Guide for State and Local Governments*. Washington, DC and Oakland, CA: American Public Health Association and Public Health Institute; 2013. <http://www.phi.org/resources/?resource=hiapguide>. Accessed 23 June 2015.

Ryan N, Williams T, Charles M, Waterhouse J: Top-down organizational change in an Australian Government agency. *International Journal of Public Sector Management* 2008;21(1):26-44.

Sabatier PA: An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences* 1988;21(2-3):129-68.

Sabatier PA: Towards better theories of the policy process. *Political Science and Politics* 1991;24(2):147-156.

Salas E, Sims DE, Burke CS: Is there a big five in teamwork? *European Journal of Public Health* 2005;15(5):576-579.

Sander MR, Markie-Dadds C, Turner KMT: Theoretical, scientific and clinical foundations of the triple P-positive parenting program: a population approach to the promotion of parenting competence. *Parenting Research and Practice Monograph* 2003;1(1):1-24.

Schaufeli WB: Work engagement. What do we know and where do we go? *Romanian Journal of Applied Psychology* 2012;14(1):3-10.

Schepper R: *Let's Move cities and towns: toolkit for local officials*. The White House, Washington, DC, USA, 2011 <http://www.villageoffranklinpark.com/DownloadTracking.aspx?DocumentId=542>. Accessed 23 June 2015.

Schiffman J: Generation of political priority for global health initiatives: a framework and case study of maternal mortality. *American Journal of Public Health* 2007;97(9595):796-803.



- Schönbeck Y, Buuren van S: Factsheet resultaten vijfde landelijke groeistudie (Factsheet: results of the fifth national study of child growth). 2010.  
<https://www.tno.nl/media/1996/20100608-factsheet-resultaten-vijfde-landelijke-groeistudie1.pdf>. Accessed 23 June 2015.
- Schultz JT, Vatucaawaqa P, Tuivaga J: National Nutrition Survey 2004. 2007.  
<http://ghdx.healthdata.org/record/fiji-national-nutrition-survey-2004>. Accessed 23 June 2015.
- Schulz B: The Modernization of Fiji's Food System and the Resulting Implications on Fijian Society: A Synthesis, SIT, 2009.  
[http://digitalcollections.sit.edu/isp\\_collection/681/](http://digitalcollections.sit.edu/isp_collection/681/). Accessed 23 June 2015.
- Schwartz MB, Puhl R: Childhood obesity: a societal problem to solve. *Obesity Reviews* 2003;4(1):57-71.
- Schwartz MB, Brownell KD: Actions necessary to prevent childhood obesity: creating the climate for change. *Journal of Law, Medicine and Ethics* 2007;35(1):78-89.
- Schwimmer JS, Burwinkle TM, Varni JW: Health-related quality of life of severely obese children and adolescents. *The Journal of the American Medical Association* 2003;289(20):1813-1819.
- Scientific Council for Governance Policy. Naar een voedselbeleid WRR-rapport nr. 93. [http://www.wrr.nl/fileadmin/nl/publicaties/PDF-Rapporten/WRR\\_rapport\\_93\\_Naar\\_een\\_voedselbeleid\\_web.pdf](http://www.wrr.nl/fileadmin/nl/publicaties/PDF-Rapporten/WRR_rapport_93_Naar_een_voedselbeleid_web.pdf). Accessed 23 June 2015.
- Scientific Council for Governance Policy. Policy Briefs. 2014.  
<http://www.wrr.nl/en/publicaties/wrr-policy-briefs/>. Accessed 23 June 2015.
- Sebelius K: U.S. Department of health & human services. 2012.  
<http://www.hhs.gov/about/index.html>. Accessed 23 June 2015.
- Sen AK: *Commodities and capabilities*. Oxford: Oxford University Press; 1985.
- Senge P: *The fifth discipline: the art and practice of the learning organization*. New York: Doubleday; 1990.
- Sépulveda J, Murray C: The state of global health in 2014. *Science* 2014;345(6202):1275-1278.

Sharma KL: Food Security in the South Pacific Island Countries with Special Reference to the Fiji Island, United Nations University, 2006.  
[http://archive.unu.edu/hq/library/Collection/PDF\\_files/WIDER/WRP/WRP203.pdf](http://archive.unu.edu/hq/library/Collection/PDF_files/WIDER/WRP/WRP203.pdf). Accessed 23 June 2015.

Shelley JJ: Addressing the policy cacophony does not require more evidence: an argument for reframing obesity as caloric overconsumption. *BioMed Central Public Health* 2012;12:1042-1050.

Sinatra FR: Nonalcoholic fatty liver disease in pediatric patients. *Journal of Parental and Enteral Nutrition* 2012;36(2):65-71.

Sindall C: Intersectoral collaboration: the best of times, the worst of times. *Health Promotion International* 1997;12(1):1-3.

Small SA, Uttal L: Action-oriented research: strategies for engaged scholarship. *Journal of Marriage and Family* 2005;67(4):936-948.

Snowden D: Multi-ontology sense making - a new simplicity in decision-making. *Informatics in Primary Health Care* 2005;12(1):45-53.

Snowdon W, Potter J.-L., Swinburn B, Schultz J, Lawrence M: Prioritizing policy interventions to improve diets? Will it work, can it happen, will it do harm? *Health Promotion International* 2010;25(1):123-133.

Snowdon W, Thow A-M: Trade policy and obesity prevention: challenges and innovation in the Pacific Islands. *Obesity reviews* 2013;14(2):150-158.

Ståhl, T, Wismar M, Ollila E, Lahtinen E, Leppo K: Health in All Policies: Prospects and Potentials. Ministry of Social Affairs and Health, Finland, Helsinki. 2006

Statistics for Development, 2013 population & demographic indicators, 2014, <http://www.spc.int/sdd/>. Accessed 23 June 2015.

Steckler A, Goodman R, Kegler MC: Mobilizing organizations for health enhancement: theories of organizational change. San Francisco: Jossey-Bass; 2002.

Steenbakkers M, Jansen MWJ, Maarse H, Vries de NK: Sturing op integraal gezondheidsbeleid: de rol van gemeentelijke afdelingshoofden (Aiming for integrated health policies: the role of heads of municipal departments) *Tijdschr Gezondheidswetenschappen* 2011;89(5):266-273.

- Steenbakkers M: Lokaal integraal gezondheidsbeleid: realistische uitdaging of utopie? Een onderzoek binnen gemeenten naar mogelijkheden tot intersectorale samenwerking. (Local integrated health policy: realistic challenge or utopian dream? a study of opportunities for intersectoral collaboration in local government). Maastricht: Maastricht University; 2012 (PhD dissertation).
- Steenbakkers M, Jansen MWJ, Maarse H, Vries de NK: Challenging health in all policies, an action research study in Dutch municipalities. *Health Policy* 2012;105(2):288-295.
- Stevenson N, Airey D, Miller G: Tourism policy making: the policymakers' perspectives. *Annals of Tourism Research* 2008;35(3):732-750.
- Stewart D, Kennedy A and Pavel A: Beyond nutrition and agriculture policy: collaborating for a food policy. *British Journal of Nutrition* 2014;112:65-74.
- Stone D: Policy Paradox-The Art of Political Decision-making. New York: W.W. Norton & Company; 1997.
- Storm I, Van Zoest L, Den Broeder L: Integraal gezondheidsbeleid: theorie en toepassing. *Integrated health policy: theory and practice*. 2007.  
<http://www.rivm.nl/bibliotheek/rapporten/270851003.html>. Accessed 23 June 2015.
- Storm I, Savelkoul M, Busch MCM, Maas J, Schuit AJ: Intersectoraal samenwerken in de aanpak van gezondheidsachterstanden: een onderzoek onder 16 gemeenten in Nederland. *Intersectoral collaboration to address health deficits: a survey of 16 Dutch municipalities*. Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu (RIVM); 2010.
- Storm I, Aarts M-J, Harting J, Schuit AJ: Opportunities to reduce health inequalities by 'Health in All Policies' in the Netherlands: an explorative study on the national level. *Health Policy* 2011;103(2-3):130-40.
- Storm I, Verweij A, Van der Lucht F: Integraal gezondheidsbeleid op lokaal niveau. Wat weten we en hoe nu verder? (local integrated health policy. What do we know and how to proceed?). Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu (RIVM); 2012.
- Storm I, Harting J, Stronks K, Schuit AJ: Measuring stages of health in all policies on a local level: the applicability of a maturity model. *Health Policy* 2014;114(2-3):183-91.

Susman GI, Roger DE: An assessment of the scientific merits of action research. *Administrative Science Quarterly* 1978;23(4):582-603.

Swinburn BA, Egger G, Raza F: Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Preventive Medicine* 1999;29(1):563-570.

Swinburn BA, Sacks G, Hall KD, McPherson K, Finegood DT, Moodie ML, Gortmaker SL: The global obesity pandemic: shaped by global drivers and local environments. *The Lancet* 2011;378(1):804-814.

Tamas M: Food Secure Islands: An analysis of the food security challenges in small island developing states in view of climate change. 2013. [http://www.academia.edu/3878463/Food\\_Secure\\_Islands](http://www.academia.edu/3878463/Food_Secure_Islands). Accessed 23 June 2015.

Tang KC, Ståhl T, Bettcher D, Leeuw de E: The Eighth Global Conference on Health Promotion: Health in All Policies: From Rhetoric to Action. *Health Promotion International* 2014;29(1):1-8.

The Council of European Municipalities and Regions: Local and regional government in Europe - structures and competences. 2012. <http://www.ccre.org/docs/publication-structures-2012-en.pdf>. Accessed 23 June 2015.

The Report of the National Taskforce on Obesity: Obesity: the policy challenges. 2005. <http://www.bvsde.paho.org/texcom/nutricion/taskforce.pdf>. Accessed 23 June 2015.

Thaler RH, Sunstein CR: *Nudge: improving decisions about health, wealth, and happiness*. New Haven: Yale University; 2008.

Thelen E, Smith LB: *Dynamic systems theories*. New York: Willey; 2006.

The Health Council: Health and behavior. 2002. [http://www.rvz.net/uploads/docs/Advies\\_-\\_Gezondheid\\_en.pdf](http://www.rvz.net/uploads/docs/Advies_-_Gezondheid_en.pdf). Accessed 23 June 2015.

The Ministry of Health: Non-communicable Diseases (NCD) Prevention and Control Strategic Plan 2010-2014. 2010. [http://www.health.gov.fj/wp-content/uploads/2014/05/2\\_National-Non-Communicable-Diseases-Strategic-Plan-2010-2014.pdf](http://www.health.gov.fj/wp-content/uploads/2014/05/2_National-Non-Communicable-Diseases-Strategic-Plan-2010-2014.pdf). Accessed 24 June 2015.

- The World Bank: Republic of Fiji Poverty Trends, Profiles and Small Area Estimation (Poverty Maps) in Republic of Fiji (2003- 2009). 2011, [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/11/02/000356161\\_20111102005822/Rendered/PDF/638420ESW0P1150isclosed0100310110FJ.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/11/02/000356161_20111102005822/Rendered/PDF/638420ESW0P1150isclosed0100310110FJ.pdf). Accessed 23 June 2015.
- Thomas B, Gostin LO: Tackling the Global NCD Crisis: Innovations in Law and Governance. *Journal of law, medicine & ethics* 2013;41(1):16-27.
- Thorpe KE, Florence CS, Howard DH, Joski P: Trends: The impact of obesity on rising medical spending. *Health Aff* 2004;Suppl Web Exclusives:W4-480 -W4-486.
- Thow A-M, Hawkes C: The implications of trade liberalization for diet and health: a case study from Central America. *Globalization and Health* 2009;5(5):1-15.
- Thow A-M, Swinburn B, Colagiuri S, Diligolevu M, Quested C, Vivili P, Leeder S: Trade and food policy: case studies from three Pacific Island countries. *Food Policy* 2010a;35(2010):556-564.
- Thow A-M, Quested C, Juventin L, Kun R, Khan AN, Swinburn BA: Taxing soft drinks in the Pacific: implementation lessons for improving health. *Health Promotion International* 2010b;26(1):55-64.
- Thow A-M, Snowden W: The effect of trade and trade policy on diet and health in the Pacific Islands. Oxford: Wiley- Blackwell; 2010c.
- Thow A-M, Heywood P, Schultz J, Quested C, Jan S, Colagiuri S: Trade and the nutrition transition: strengthening policy for health in the pacific. *Ecology of Food and Nutrition* 2011;50(1):18-42.
- Thow A-M, Downs S, Jan S: A systematic review of the effectiveness of food taxes and subsidies to improve diets: understanding the recent evidence. *Nutrition Reviews* 2014;72(9):551-565.
- Travis P, Egger D, Davies P, Mechbal A: Towards better stewardship. 2002. <http://www.who.int/healthinfo/paper48.pdf>. Accessed 23 June 2015.
- Trivedi NJ, Fields J, Mechanick CH, Klein M, Mechanick JI: Lack of correlation between anti-obesity policy and obesity growth rates: review and analysis. *American Association of Clinical Endocrinologists* 2012;18(5):737-744.
- Trope Y, Liberman N: Construal-level theory of psychological distance. *Psychological Review* 2010;117(2):440-463.

Tubbing L, Tjemkes B, Vos P, Keijsers J, Paulussen T: Intersectorale allianties: een literatuurstudie en onderzoeksraamwerk.

<http://repository.tudelft.nl/view/tno/uuid%3Ab0534858-4912-44ac-870f-a56fd7b286fd/>. Accessed 23 June 2015.

Tubbing L, Harting J, Stronks K: Unravelling the concept of integrated public health policy: Concept mapping with Dutch experts from science, policy, and practice. *Health Policy* 2015;119(6):749-759.

Tunceli K, Li K, Williams LK: Long-term effects of obesity on employment and work limitations among U.S. adults, 1986 to 1999. *Obesity* 2006;14(9):1637-1646.

Tromp N, Baltussen R: Mapping of multiple criteria for priority setting of health interventions: an aid for decision makers. *BioMed Central Health Services Research* 2012;12:454-251.

Unger JP, Macq J, Bredo F, Boelaert M: Through Mintzberg's glasses: a fresh look at the organization of ministries of health. *Bulletin of the World Health Organization* 2000;78(8):1005-1014.

UN Chronicle: The Magazine of the United Nations. Global Health: Then and Now. <http://unchronicle.un.org/article/global-health-then-and-now/>. Accessed 23 June 2015.

United Nations: Secretary-General's Ban Ki-Moon Statement to the World Health Assembly. UN, Geneva, 2009.

United Nations General Assembly: Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. New York: United Nations; 2011.

Verduin P, Agarwal S, Waltman S: Solutions to obesity: perspectives from the food industry. *The American Journal of Clinical Nutrition* 2005;82(1):259-261.

Vereniging van Nederlandse Gemeenten (VNG): Toekomstvisie op publieke gezondheid maatschappelijke vraagstukken centraal - verbinden verschillende beleidsdomeinen. Policy outlook on public health: focus on social issues - linking policy domains. 2009.  
<http://www.vng.nl/files/vng/vng/Documenten/Extranet/Sez/OGZ/Toekomstvisie%20publieke%20gezondheid.pdf>. Accessed 23 June 2015.

- Visness CM, London SJ, Daniels JL, Kaufman JS, Yeatts KB, Siega-Riz AM, Calatroni A, Zeldin DC: Association of childhood obesity with atopic and nonatopic asthma: results from the national health and nutrition examination survey 1999-2006. *Journal of Asthma* 2010;47(7):822-829.
- Wagemakers A, Koelen MA, Lezwijn J, Vaandrager L: Coordinated action checklist: a tool for partnerships to facilitate and evaluate community. *Global Health Promotion* 2010;17(3):17-29.
- Wagner KH, Brath H: A global view on the development of non-communicable diseases. *Preventive Medicine* 2012;54(1):38-41.
- Walt G, Gilson L: Reforming the health sector in developing countries: the central role of policy analysis. *Health Policy and Planning* 1994;9(4):353-70.
- Wang YC, McPherson K, Marsh T, Gortmaker SL, Brown M: Health and economic burden of the projected obesity trends in the USA and the UK. *Lancet* 2011;378(9793):815-825.
- Waga G, Mavoa H, Snowdon W, Moodie M, Nadakuitavuki R, McCabe M, Swinburn B: Participants' perceptions of a knowledge-brokering strategy to facilitate evidence-informed policymaking in Fiji. *BioMed Central Public Health* 2013;13(725):1-9.
- Warner M, Gould N: Integrating Health in All policies at the local levels: using network governance to create 'virtual reorganization by design. New York: Springer; 2009.
- Wate JT, Snowdon W, Millar L, Nichols M, Mavoa H, Goundar R, Kama A and Swinburn B: Adolescent dietary patterns in Fiji and their relationships with standardized body mass index. *International Journal of Behavioral Nutrition and Physical Activity* 2013;10(1):45-57.
- Watson SPWE, Johnson L: The effects of competition on the decision quality of diverse and nondiverse groups. *Journal of Applied Psychology* 1998;28(10):912-923.
- Webber L, Divajeva D, Marsh T, McPherson K, Brown M, Galea G, Breda J: The future burden of obesity-related diseases in the 53 WHO European-Region countries and the impact of effective interventions. A modelling study. *British Medical Journal* 2014;4(7):1-8.

Weber EP, Khademian AM: Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. *Public Administration Review* 2008;68(2):334-349.

Wells JCK: The evolution of human adiposity and obesity: where did it all go wrong? *Disease Models & Mechanisms* 2012a;5(5):595-607.

Wells JCK: Obesity as malnutrition: the role of capitalism in the obesity global epidemic. *The American Journal of Human Biology* 2012b;24(3):261-276.

Wen X, Gillman MW, Rifas-Shiman SL, Sherry B, Kleinman K, Taveras EM: Decreasing prevalence of obesity among young children in Massachusetts from 2004 to 2008. *Pediatrics* 2012;129(5):823-831.

West MA: Sparkling fountains or stagnant ponds: an integrative model of creativity and innovation implementation in work groups. *Applied Psychology: An International Review* 2002;51(3):355-424.

Whitehead M, Scott-Samuel A, Dahlgren G: Setting targets to address inequalities in health. *Lancet* 1998;351(9111):1279-1282.

World Health Organization: The Ottawa charter for health promotion. 1986. <http://www.who.int/healthpromotion/conferences/previous/ottawa/en/index.html>. Accessed 21 June 2015.

World Health Organization: Social determinants of health - the solid facts. 2003a. [http://www.euro.who.int/\\_data/assets/pdf\\_file/0005/98438/e81384.pdf](http://www.euro.who.int/_data/assets/pdf_file/0005/98438/e81384.pdf). Accessed 24 June 2015.

World Health Organization: Diet, food supply and obesity in the Pacific. 2003b, [http://www.wpro.who.int/publications/docs/diet food supply obesity.pdf](http://www.wpro.who.int/publications/docs/diet%20food%20supply%20obesity.pdf). Accessed 21 June 2015.

World Health Organization: Health equity through intersectoral action: an analysis of 18 countries case study. 2008. [http://www.who.int/social\\_determinants/resources/health\\_equity\\_isa\\_2008\\_en.pdf](http://www.who.int/social_determinants/resources/health_equity_isa_2008_en.pdf).

World Health Organization: Fiji country health information profiles. 2011. [http://www.wpro.who.int/countries/fji/7FIJpro2011\\_finaldraft.pdf?ua=1](http://www.wpro.who.int/countries/fji/7FIJpro2011_finaldraft.pdf?ua=1). Accessed 21 June 2015.

World Health Organization: Childhood overweight and obesity. 2013a. <http://www.who.int/dietphysicalactivity/childhood/en/>. Accessed 21 June 2015.



- World Health Organization Western Pacific Region: Draft regional action plan for reducing the double burden of malnutrition in the Western Pacific Region 2014-2020. 2013b. [http://www.who.int/nutrition/events/2013\\_Consultation\\_WPRO\\_malnutrition\\_19to21Nov2013/en/](http://www.who.int/nutrition/events/2013_Consultation_WPRO_malnutrition_19to21Nov2013/en/). Accessed 21 June 2015.
- World Health Organization: Obesity. 2014a. <http://www.who.int/topics/obesity/en/>. Accessed 21 June 2015.
- World Health Organization: Health in All Policies (HiAP) Framework for Country Action. 2014b. [http://www.who.int/cardiovascular\\_diseases/140120HPRHiAPFramework.pdf?ua=1](http://www.who.int/cardiovascular_diseases/140120HPRHiAPFramework.pdf?ua=1). Accessed 21 June 2015.
- World Health Organization: Noncommunicable Diseases: Country Profiles. 2014c. [http://apps.who.int/iris/bitstream/10665/128038/1/9789241507509\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/128038/1/9789241507509_eng.pdf?ua=1). Accessed 21 June 2015.
- World Health Organization: Obesity and overweight fact sheet N°311. 2014d. <http://www.who.int/mediacentre/factsheets/fs311/en/>. Accessed 21 June 2015.
- World Health Organization: 8th WHO Global Conference on Health Promotion: Helsinki Statement on Health in All Policies and the HiAP Framework for Country Action. 2014e. [http://apps.who.int/iris/bitstream/10665/112636/1/9789241506908\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/112636/1/9789241506908_eng.pdf). Accessed 21 June 2015.
- Woulfe J, Oliver TR, Zahner SJ, Siemering KQ: Multisector partnerships in population health improvement. *Preventing Chronic Disease* 2010;7(6):1-7.
- Wree A, Kahraman A, Gerken G, Canbay A: Obesity affects the liver—the link between adipocytes and hepatocytes. *Digestion* 2010;83(1-2):124-133.
- Wyber R, Wilson N, Baker M: New Zealand's impact on health in the South Pacific: scope for improvement? *The New Zealand Medical Journal* 2009;122(1291):60-68.
- Yach D, McKee M, Lopez AD, Novotny T: Improving diet and physical activity: 12 lessons from controlling tobacco smoking. *British Medicine Journal* 2005;330(7496):898-900.
- Yancey AK, Lewis LB, Sloane DC, Guinyard JJ, Diamant AL, Nascimento LM, McCarthy WJ: Leading by example: a local health department community collaboration to incorporate physical activity into organizational practice. *Journal of Public Health Management Practice* 2004;10(2):116-123.

Yanow D, Schwartz-Shea P: Interpretation and method: empirical research methods and the interpretive turn. New York: ME Sharp; 2006.

Yin RK: Case study research, design and methods. Newbury Park: Sage Publications; 2002.

Yip J, Wong S, Ernst C: The nexus effect: when leaders span group boundaries. *Leadership in Action* 2008;28(4):13-17.

Zhikui L, Nan Z, Qingguo M: Understanding cross-sector collaboration in E-government development: theoretical consideration based on extended Bryson's Framework. In *Proceedings of the Pacific Asia Conference on Information Systems (PACIS '10)* 2010;99:1007-1019.

## Valorization addendum

### **Why are the outcomes of this research relevant to society?**

Obesity is an important cause of non-communicable diseases, low quality of life, high healthcare costs and high indirect costs due to reduced productivity and early mortality (Kelsey et al., 2013; Dee et al., 2014; Webber et al., 2014). In 2010, overweight and obesity were estimated to cause 3.4 million deaths, 3.9% of years of life lost, and 3.8% of disability-adjusted life-years worldwide (Ng et al., 2014). The latest reports indicate that a decline in obesity is not expected, except for a modest decline among men in the Netherlands (Webber et al., 2014).

Since obesity is caused by the 'systems' in which people live, efforts to shift the systems that support the emergence of obesity need to be implemented (Johnston et al., 2014). One important prerequisite to achieve such system-wide changes is the development of integrated public health policies (Gortmaker et al., 2011; Swinburn et al., 2011; Brennan et al., 2014; Roberto et al., 2015).

In The Netherlands, the development of public health policies is decentralized to public health officials within the local government (i.e., the municipality). Within Dutch local governments, the public health officials' work is guided by strategic (e.g., aldermen, municipal secretary) and tactical (e.g., managers) level actors from health and non-health sectors. The development of integrated policies is enabled through collaboration between officials from health and non-health sectors (i.e., intersectoral collaboration). Outside government, public health officials may be supported by officials from the Public Health Service (which is formally an extension of the local government's public health sector) and other institutions with similar functions (e.g., the Youth on a Healthy Weight or JOGG office).

Unfortunately, the development of integrated public health policies has in practice shown to be hampered. So far, it remained unclear why this was the case. Since the outcomes of the research described in this dissertation provide some first insights in the barriers and facilitators for the slow development of integrated public health policy, and explored possible ways to address these factors, it is expected this dissertation will contribute to practice.

In the upcoming sections, a more specific outline of the target groups of these insights and practical activities that can be implemented for these target groups is outlined.

**For whom are the insights that are obtained from this dissertation relevant?**

First of all, insights from this dissertation are relevant to the public health officials. They are formally charged with developing integrated public health policy and therefore can benefit from a better understanding of barriers and facilitators for their development.

Second of all, insights are relevant for those whose aim it is to support policymakers within government. Examples of such organizations include actors working within the Public Health Service and JOGG office (e.g., managers and coaches). Actors in these organizations are in a position to train actors at the operational level (who are actually charged with developing integrated policy).

Thirdly, governmental leaders at the strategic and tactical level (e.g., aldermen, municipal secretaries, and managers) within and outside the public health sector can use the insights obtained from this dissertation. They are in a position to restructure the environment of operational level actors and enable them to develop integrated policies at the local and regional level.

Fourthly, the insights are relevant for actors that influence strategic and tactical level leaders within local, regional and national governments. Examples of actors influencing local and regional government include actors working in the national government, while examples of actors influencing national governments include health organizations such as the World Health Organization. They have the means and position to support governmental actors at the strategic and tactical level and can support operational level officials and supporting organizations such as the JOGG office.

Fifthly, our insights are relevant to students in the field of public health or other fields in which the development of integrated policies is relevant. These students might, on a long-term, become responsible for the development of integrated policies and therefore, investing in their capability to develop such policies is relevant.

**What can these target groups do with the insights obtained from this dissertation?**

Since each of these target groups has different core tasks and responsibilities, the activities they can implement to support the development of integrated public health policies also differ.

With regard to the public health officials themselves, we would recommend them to use the knowledge from this dissertation to more pro-actively approach policymakers from the non-health sectors. Currently, few officials from the public health sector did this in a pro-active way, which resulted in slow progress. Since officials from non-health sectors were often unaware of their influence on public health, the public health sector should invest efforts in creating such awareness. Moreover, they can help non-health sectors in seeing the added value of such integrated policies by highlighting the similarities in policy goals between their

sectors. Public health officials should therefore reframe their goals in the terminology of the non-health sectors.

With regard to those whose aim it is to support policymakers, we would recommend to disseminate a guideline and provide training regarding the development of integrated public health policies. Public Health Services and JOGG coaches may increase knowledge and capability of actors within government. Although guidelines on developing integrated public health policy currently exist, they are often poorly tailored to the needs of policymakers that were highlighted in this dissertation. Moreover, a training to support policymakers in developing integrated policy does not exist and therefore we think the development and implementation of such training will add value to practice.

With regard to the activities that can be implemented by the governmental leaders at the strategic and tactical level, the results of the studies in this dissertation indicate that implementation of organizational restructuring is important. Currently, many local government organizations are hierarchically organized, leading to divergence rather than convergence of interests. To make the governmental environment in which integrated public health policies are developed more conducive to their development, we recommend that efforts are incrementally invested in flattening the organizational structures and establishing shared goals for officials from health and non-health policy sectors. Moreover, the results of the studies in this dissertation indicate that leaders in government need to manage and lead collaboration processes better and in an adaptive way.

With regard to the activities that are aimed at influencing strategic and tactical level leaders within local, regional or national government, we recommend that actors at higher levels of government or (e.g., the Ministries) and actors that influence national governments (e.g., the World Health Organization), (incrementally) create a climate in which the development of integrated public health policies is the norm rather than the exception. They can achieve this through educating, persuading, and especially incentivizing local governmental actors at the strategic level to develop such policies. Additionally, they can educate, train, and provide role models for actors at the tactical level. Besides this focus on the governmental actors at the higher hierarchical levels, they can support operational level officials directly through, for example, provide training and resources for supporting organizations (e.g., the Public Health Service and JOGG office).

Implementation of activities aimed at students has already taken place. In the last two years, a module which trains students to develop integrated public health policies has been developed and implemented within the Health Promotion master of Maastricht University. Moreover, this module is continuously being revised and will be implemented in the upcoming year again.

**What is needed for the implementation of these activities?**

The actual implementation of these activities will depend on the interest of local, national and international governments and organizations that support these governments, in the development of integrated public health policies and obesity prevention. Although obesity prevention has gained momentum, a barrier might be that - when the 'window of opportunity' closes - interest in the development of these policies will fade out. Therefore, the work of advocates in the obesity field will remain important in the upcoming years.

To develop guidelines and implement trainings, an implementation grant and commitment from the JOGG office is important. Based on a meeting of the JOGG managers and the CIAO researchers in The Hague in 2015, interest for the development of such a training was present. However, to actually develop and implement this training, JOGG coaches need to be trained and this will require additional time, resource investments and coaching. Therefore, implementation subsidies are needed to make such investments feasible. As the JOGG office is currently a non-profit foundation, there is a realistic opportunity that such additional investments may be achieved.

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## **Curriculum Vitae**

Anna Marie Hendriks was born on June 29, 1987 in Heerenveen, The Netherlands. After having graduated from secondary school in 2005 (Linde College in Wolvega) she started studying Health Sciences at Maastricht University. In 2008 she was awarded a bachelor in Health Sciences and decided to take a sabbatical to work as a volunteer at a school for disabled children in Gwalior, India. After she returned from this sabbatical, she started a Masters in Health Promotion at Maastricht University in 2010. She obtained her master's degree in 2011. Anna Marie started as a PhD-student after she briefly worked as a research assistant at the department of Health Promotion in 2011. In the future, Anna Marie hopes to combine her three biggest passions: writing, interviewing and travelling.



